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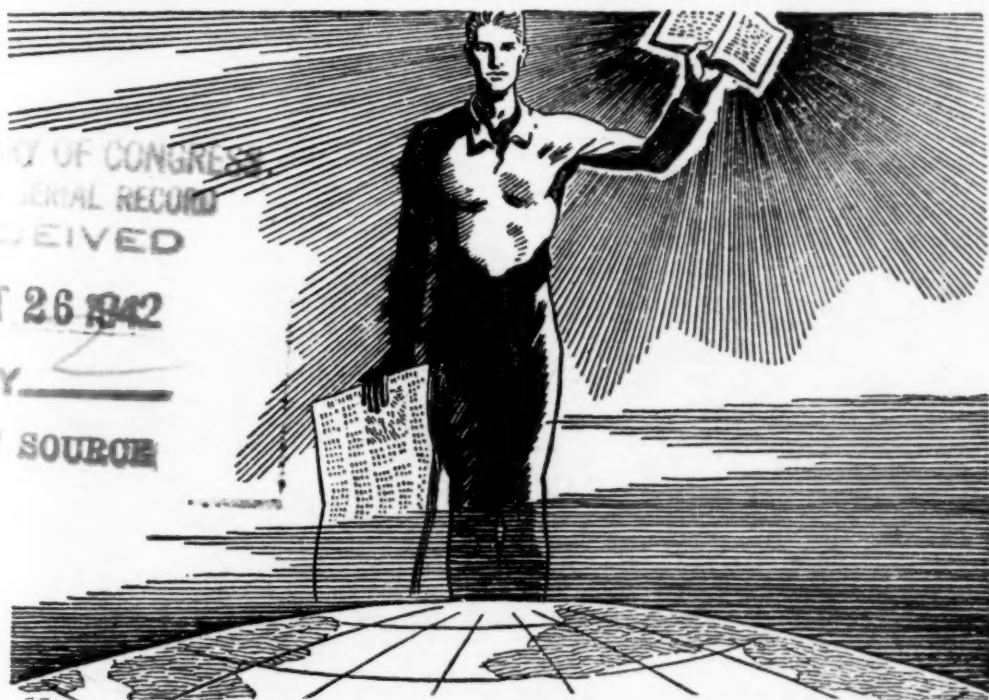
OCTOBER 1942

*Monthly*

# LABOR

*Review*

VOL. 55 • NO. 4



## THE FOUR FREEDOMS

### 1. Freedom of Speech

*In this Issue . . .* Progress of Price Regulation • Shipyard  
Injuries • Wages in Military-Tank  
Assembly • Earnings in Shipyards

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

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# MONTHLY LABOR REVIEW

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

**♦ ♦ ♦ ♦ ♦ + HUGH S. HANNA, EDITOR + ♦ ♦ ♦ ♦ ♦**

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## *This Issue in Brief*

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### *Price regulation to September 1942.*

The General Maximum Price Regulation issued in April by the Office of Price Administration appears to have effectively checked the general advance in prices for commodities and services which are subject to control. The rise in rents in those areas in which ceilings had been imposed were also stopped. However, prices continued to advance for commodities which could not be controlled under the terms of the Emergency Price Control Act of 1942—that is, primarily farm products and about 40 percent of all foods. The rising trend of living costs had not been fully halted owing to the exemptions. Page 659.

### *Shipyard injuries and their causes.*

Shipyard workers experienced 27 disabling work injuries for every million employee-hours worked in 1941. Hull erection on the ways was the industry's most hazardous operation, with lost-time injuries occurring at the rate of 40 per million man-hours. A great many of the reported injuries resulted directly from the violation of elementary safety principles, due in large measure to the shortage of well-trained supervisors and to the highly increased tempo of shipyard activities. Page 680.

### *Earnings in military-tank assembly shops.*

In 5 army-tank assembly shops hourly earnings ranged from 65.6 cents for laborers to \$1.32 for riveters in August 1942 for straight-time work on the first daylight shift. Slightly over one-half of the workers in the 26 occupations covered were class A fitters, averaging \$1.22 an hour, and pneumatic tool operators, earning \$1.15. Page 697.

### *Spending and savings of farm and city families.*

Supplementing the article on spending and savings of city families in 1941 and 1942 in the previous issue of the Monthly Labor Review, the article here presented (page 700) gives similar information for city and farm families combined and in contrast. In general, farm families were found to have smaller cash incomes and much more income in kind than city families, and also to devote a much larger portion of their incomes to savings in various forms.

### *Sources of shipbuilding labor.*

Recent recruits of shipyards in the Pacific Northwest have come from many industries. One-sixth of the workers hired by the shipyards in a selected week in June 1942 were from other shipyards. Wholesale and retail trade contributed 10.8 percent and lumber industries 7.9 percent. No other industry supplied as much as 7 percent of the total. Former aircraft workers constituted 1 percent of the workers hired and persons recently unemployed less than 0.5 percent. Page 735.

### *Earnings in the manufacture of machine tools.*

Average hourly earnings in machine-tool plants increased from 79.9 cents in August 1939 to \$1.017 in the spring of 1942. Part of the rise is due to increased payments for overtime. The average workweek increased by nearly 10 hours. Of the 46 plants studied, 21 were operating 2 shifts and 19 were working 3 shifts. More than one-fourth of the employees were in occupations showing average hourly earnings of more than \$1.00 exclusive of overtime and night premiums. Page 802.

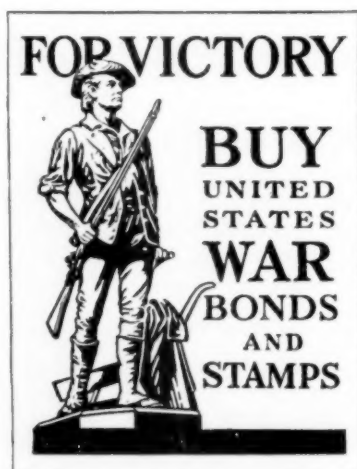
### *Earnings in mining and processing nonferrous metals.*

Straight-time hourly earnings in June 1942 averaged 84.1 cents for workers in the mining and milling of copper, 84.3 cents in the extraction of lead and zinc,

and 88.0 cents in other nonferrous mines and mills. The hourly averages for smelting were 84.1 cents for copper, 80.8 cents for lead, and 90.1 cents for zinc. Workers engaged in electrolytic refining of copper earned 83.9 cents and in electrolytic zinc production 89.0 cents. Page 830.

*Wartime food control in Great Britain.*

Wartime control over food supplies in Great Britain, according to a report of the International Labor Office, has been organized to insure an even and adequate flow of food into the channels of distribution and to distribute the foods equitably among all classes. Measures adopted for this purpose include governmental control of demand through rationing, price control, improvement of nutrition through such methods as the milk-distribution scheme and the addition of vitamins to margarine and bread, and education of consumers as to the nutritional values of different foods. The agricultural policy has been to bring a greater amount of land under cultivation, the area under plow having increased about 50 percent over the peacetime figure. Page 728.





# MONTHLY LABOR REVIEW

FOR OCTOBER 1942

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## PROGRESS OF PRICE REGULATION TO SEPTEMBER 1942

By SAUL NELSON, *Bureau of Labor Statistics*

### *Summary*

ON April 28, 1942, Price Administrator Henderson issued the General Maximum Price Regulation. This rule established maximum prices for the greater part of the commodities and services sold at retail and also brought under control at wholesale the majority of commodities and services for which price ceilings had not previously been issued. At the same time a companion order took the first step toward extending rent control to almost all urban areas in the United States.

These two sweeping orders followed closely upon a call-to-arms by President Roosevelt against the menace of inflation. In a message to Congress on April 27, 1942, and a "fireside chat" to the people of the United States on the following day, the President emphasized the seriousness of the situation and mapped out a 7-point campaign for the purpose of keeping living costs down. It was to implement one of these points—the stabilization of all prices and rents—that the General Maximum Price Regulation and the accompanying recommendation on rent control were issued.

About 5 months have elapsed since these events, as this article goes to press. Although the evidence is not fully conclusive, the general advance in prices of the commodities and services subject to the General Maximum Price Regulation and of rents in those areas in which ceilings have gone into effect has apparently largely been checked, although there is pressure against these maxima for certain kinds of goods. On the other hand, prices continue to rise for many farm products which could not successfully be controlled under the terms of the Emergency Price Control Act of 1942; these have led in turn to increases in the cost of many foods both at wholesale and at retail. As a result, the rising trend of living costs has not been fully halted.

By the beginning of September it had become evident that a broad further advance in prices might occur unless prompt steps were taken to translate the entire 7-point program into action. Accordingly, on September 7, President Roosevelt again addressed Congress and the people asking that authority be granted to fix ceilings upon farm prices at parity and urging the prompt enactment of new taxes for the purpose of narrowing the rapidly growing gap between consumer purchasing power and the goods available for civilian consumption. At

the same time he stated that he would undertake to stabilize wages. In response to this message Congress amended the act on October 2, and on the following day President Roosevelt and Price Administrator Henderson took sweeping action to implement the new program.

### *Events Leading to the General Price Regulation*

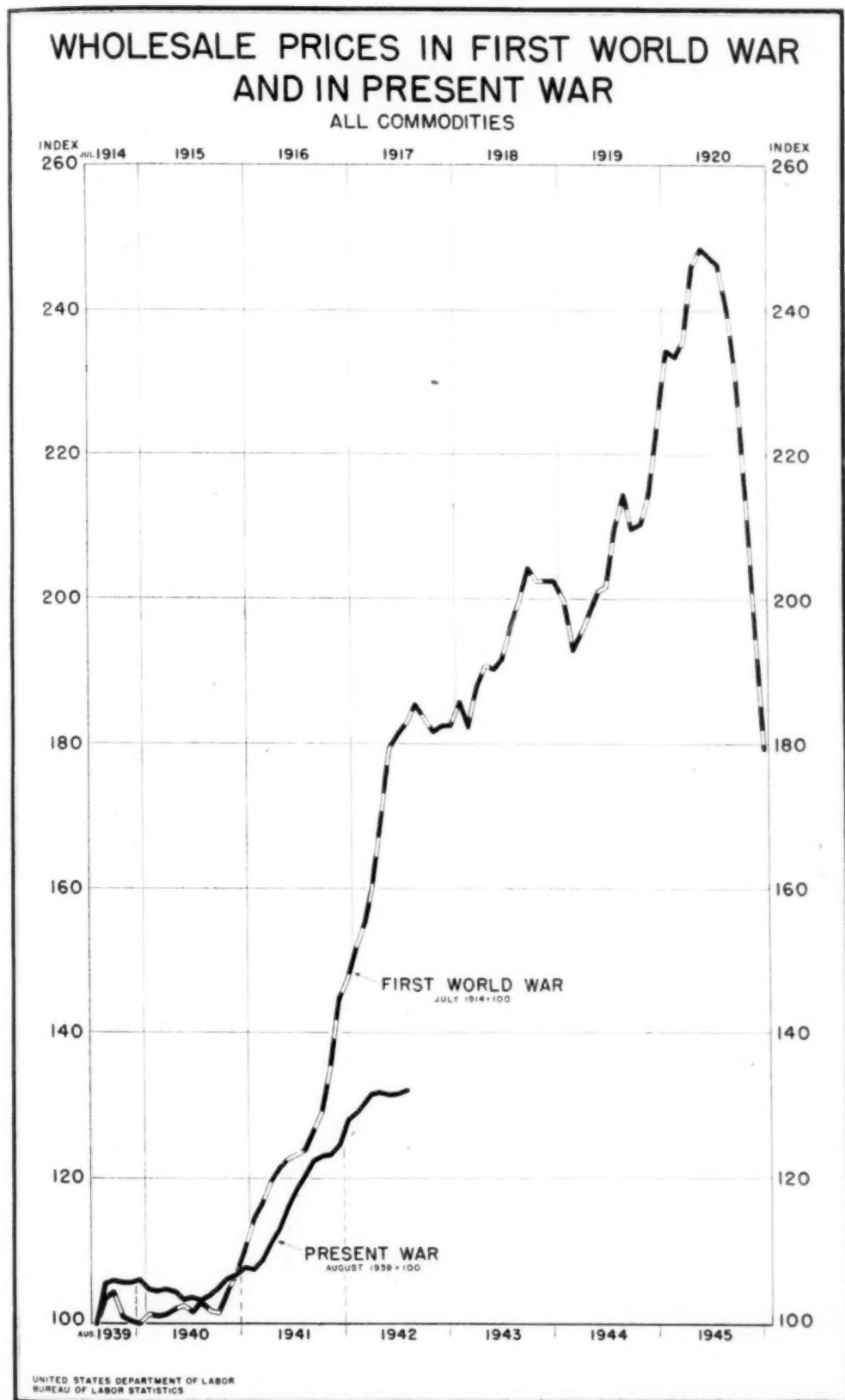
#### PRICE TRENDS

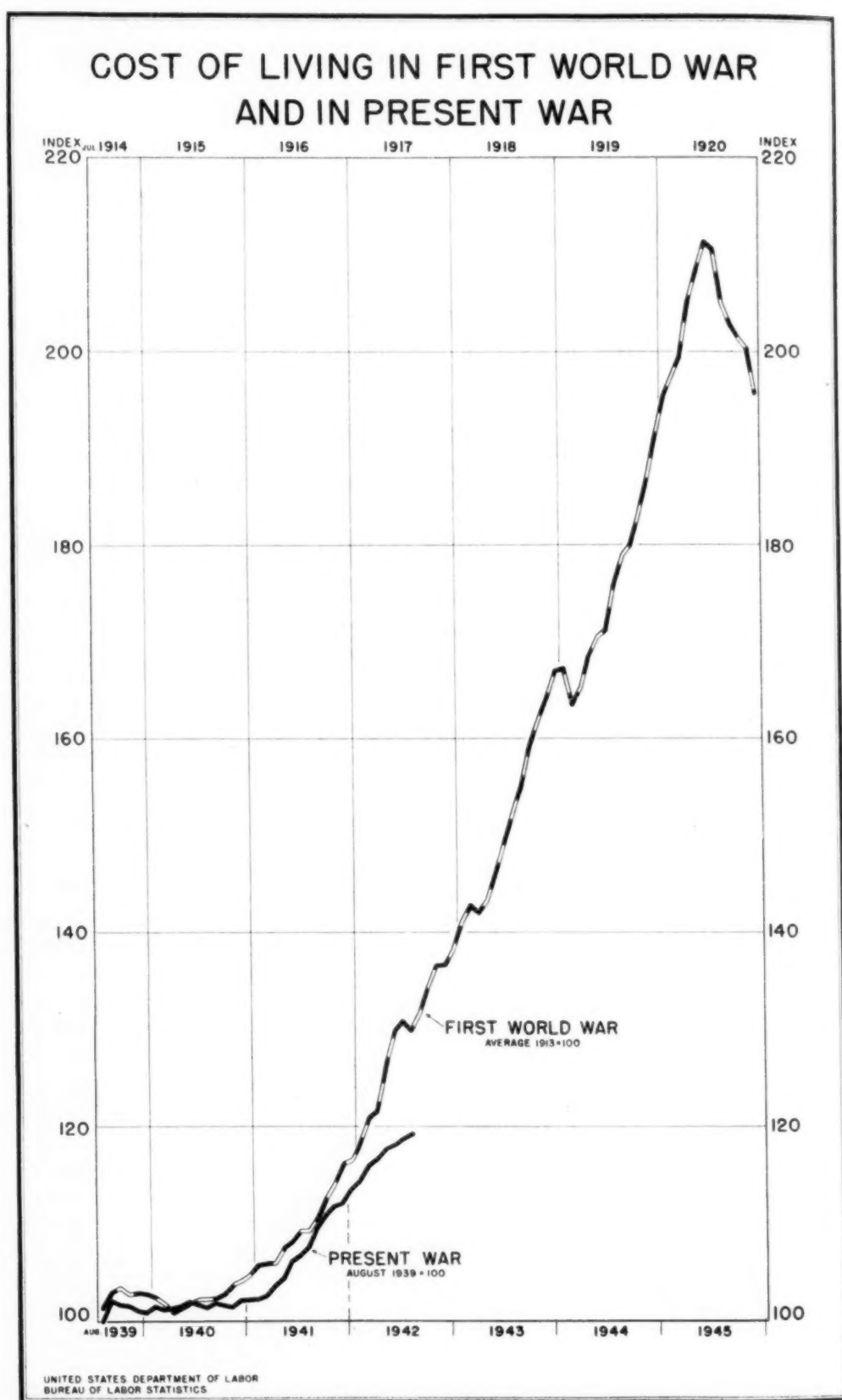
The promulgation of the General Maximum Price Regulation followed more than a year of steadily rising prices in both wholesale and retail markets. The advance in wholesale prices started in earnest about the middle of February 1941, and retail prices began to move upward steadily a month later. During the 12 months ended in mid-March 1942 the average wholesale prices of 28 basic commodities rose nearly 30 percent. In the same period the general level of wholesale prices jumped fully 20 percent, and living costs to the urban wage earner advanced 13 percent. The charts (pages 661 and 662) show that these advances closely approximated both in timing and extent those which had occurred during the same period in World War I.

This steady rise in the general price level persisted despite every effort to check it through the issuance of price ceilings for a wide range of individual commodities. By mid-March 1942 approximately one-half, by value, of the commodities included in the Bureau of Labor Statistics' comprehensive wholesale-price index were under control at wholesale, either through formal ceilings or effective informal agreements; yet the advance in other prices continued so rapidly that the rise in the general price level showed little signs of slackening. The steady uptrend in living costs had largely nullified the wage increases which many workers had succeeded in gaining during the preceding year, and demands for further wage raises were becoming widespread. It became increasingly evident that prompt and comprehensive action was needed in order to prevent a violent inflationary spiral. To meet this situation, the General Maximum Price Regulation was promulgated on April 28. It became effective as to transactions in wholesale markets on May 11 and as to most transactions at retail on May 18.

In order to place these events in their proper perspective it should be noted that the price advance which began in the spring of 1942 represented the third major phase in the price advance since the invasion of Poland. There was a brief initial spurt in prices immediately following the declaration of war in Europe, which carried basic commodity prices up more than 27 percent in 3 weeks, while the general wholesale price level rose about 6 percent in the first 4 months of war. These early advances were most pronounced for a limited group of raw materials directly affected by the conflict and showed also marked speculative characteristics. Living costs rose but little during this period and, except for a few imports, the entire increase in prices was largely dissipated by the beginning of August 1940, soon after the fall of France.

The second phase of advancing markets began in midsummer 1940 when the initial impact of the new defense program made itself felt. By the end of the year the general wholesale price level had recovered to a point slightly above its early post-war peak. The character of the advance during the latter part of 1940 was quite different from that which had prevailed during the fall and early winter of 1939. It was considerably broader and firmer, with speculation playing a







much less important role. Moreover, a considerable number of manufactured products joined in the advance, whereas the 1939 rise had been confined principally to imports and to domestic raw materials. Living costs continued to remain fairly stable during this entire period, rising only 1.6 percent from August 1939 to December 1940.<sup>1</sup>

At the beginning of 1941, after this second phase of the advance had concluded, the general level of commodity prices was still relatively low. Despite fairly sharp advances in prices of products directly affected by the war abroad and by rearmament at home, wholesale prices generally were only 7 percent higher than they had been prior to the invasion of Poland, and remained far below their 1937 peaks. The cost of living at the end of 1940 was only fractionally above its average for the 5-year period, 1935-39. In fact, prices had even been held in check for many commodities greatly in demand under the defense program. This was particularly true of primary metals such as steel, aluminum, and copper; leading manufacturers of these products for the most part cooperated willingly with Price Commissioner Henderson in his efforts to restrict price advances. Thus, despite the extreme pressure to which metals markets were being subjected under the defense program, the average wholesale price of metals and metal products was only 4½ percent higher at the end of 1940 than it had been in August 1939, and the quoted price of most semifinished steel products had not advanced at all.

Early in 1941 there was a brief lull in the advance, presaging its third and current phase. This apparent stability of most markets during January and early February was merely an interlude. The defense program was rapidly gathering momentum and was shortly to be augmented greatly by the passage of the Lease-Lend Act. Government expenditures were mounting steadily and a large part of these expenditures ultimately found its way into the hands of the consuming public. Employment was rising, overtime was more general, and pay envelopes were swelling rapidly.

While demand was thus increasing, the supply of goods available for civilian consumption could not be expanded correspondingly. The priority system was beginning to make itself felt. The supply of basic metals, and, later, of a wide range of raw materials proved inadequate to supply combined civilian and military needs. Businessmen in almost all fields began to expand their inventories rapidly in order to anticipate the shortages which appeared to be imminent. Speculators sensed the opportunity for quick profits and entered commodity markets on a large scale.

By the middle of March 1941, the third phase of the price advance was well under way. This phase was far broader than either of the moves which had preceded it; it embraced almost the entire range of commodity markets and carried wholesale prices rapidly up past their 1937 peaks to levels approximating those of the late twenties.<sup>2</sup> Retail prices and living costs also began an advance which was to continue without interruption for more than a year.

#### PRE-STATUTORY CONTROLS

As the increase spread and quickened, the need for Federal action to control the situation and to prevent a repetition of the disastrous

<sup>1</sup> See Monthly Labor Review, January 1941 (pp. 49-65): Prices and the War.

<sup>2</sup> See Monthly Labor Review, November 1941 (pp. 1071-1102): American Commodity Markets After 2 Years of War.

inflation of World War I became clear. On April 11, 1941, Price Commissioner Henderson was made Administrator of the Office of Price Administration and Civilian Supply, with greatly broadened duties but no significant addition to his powers. In fact the only real recourse available to the Price Administrator against those who refused to comply with his orders was the threat of publicity which might carry with it public disapproval.

Under the circumstances, it is not surprising that efforts to control prices during the first half of 1941 met with varying success. Thus, although prices of most primary metals were effectively stabilized, ceilings issued for scrap metals were often honored more in the breach than in the observance. Also, manufacturers of cotton textiles strongly resisted a price ceiling ordered for gray goods, and succeeded in forcing its substantial modification. A large automobile manufacturer openly refused to comply with the Price Administrator's request to cancel a price increase, and efforts to prevent automobile prices from rising had to be abandoned temporarily.

#### SELECTIVE PRICE CONTROL

To remedy this situation, a bill was introduced into Congress on July 28, 1941 for placing price control upon a statutory basis and establishing appropriate penalties for refusal or failure to comply.<sup>3</sup> After prolonged hearings by the Committee on Banking and Currency of the House of Representatives, this bill passed the House in greatly amended form. Hearings before the corresponding committee in the Senate began shortly after the attack upon Pearl Harbor, and were considerably shorter. Finally, after many vicissitudes, the Price Control Act was approved by both Houses and signed by the President on January 30, 1942.

The act as originally introduced and as approved was based upon the principle of so-called "selective price control." Under this principle it had been anticipated that price ceilings would be established for a fairly restricted list of commodities of key importance to the economic system, such as steel, copper, cotton gray goods, flour, lumber, lard, and the like. The theory behind this program was that by establishing a ceiling for these "price-determining prices" the general market level could be effectively controlled with a minimum of administrative difficulty. It was assumed, in effect, that by fixing the price of steel and other metals, the major element in the cost of metal products would be stabilized and price increases for such products made unnecessary; that fixing the prices for cotton gray goods would suffice to hold down the cost and prices of cotton clothing, etc.

This scheme offered the great advantage of administrative simplicity. It contemplated controlling a limited number of standard commodities for which specifications could be drawn easily. Most of these articles were produced by a moderate number of large manufacturers, thus simplifying the policing problem. If this plan could be made to work satisfactorily, it would avert the need of dealing with exceedingly complex products difficult to describe or to specify, such as women's dresses. It was hoped that selective price control would make unnecessary close supervision of tens of thousands of small manufacturers and wholesalers and millions of retailers.<sup>4</sup>

<sup>3</sup> Price Control Bill, H. R. 5479 (77th Cong., 1st sess.).

<sup>4</sup> Hearings before the Committee on Banking and Currency, on H. R. 5479 (77th Cong., 1st sess.), Washington, 1941, pp. 833-874.

*The Baruch Plan.*—During the consideration of the bill by the House Committee, an effort was made to substitute a measure providing an entirely different scheme of control. Originally proposed by Bernard Baruch, Chairman of the War Industries Board in World War I, this scheme would have frozen all prices, all wages, and all rents at levels prevailing on some base date, preferably a date prior to the beginning of the major price upswing.<sup>5</sup> Provision could be made for the adjustment of cases of individual inequity or hardship arising under such a general price "freeze." This plan was rejected by Congress, although on December 1, 1941, a decree patterned largely upon Mr. Baruch's proposal had actually been put into force in Canada.<sup>6</sup>

There appear to have been two principal reasons for the rejection of the plan of general price control in the United States at that time. The first was its apparent administrative complexity; the need that would arise for policing the length and breadth of American markets, and the probability that machinery would have to be created for making a very large number of adjustments to avoid excessive hardship in individual cases. There was also objection to the principle of direct wage control, which it incorporated. Although it was recognized generally that prices could not be held down without some check upon wages, it was believed by many that other means for preventing excessive wage increases were preferable.

*Terms of the act.*—Whatever the merits of these respective views, the Price Control Act<sup>7</sup> as adopted incorporated essentially the principles of selective price control. It permitted the Price Administrator to establish price ceilings for those commodities whose prices appeared to be rising to an extent threatening the purposes of the act. In accordance with constitutional requirements, it prescribed certain standards for the establishment of such ceilings—principally providing that they should be set with due reference to the level of prices prevailing between October 1 and October 15, 1941. It established machinery for rent control by giving the Administrator authority to designate defense rental areas in localities where excessive rent increases were threatened; allowing local authorities 60 days in which to remedy the situation by their own methods, and then permitting the Administration to establish maximum rentals if local authorities failed to achieve success.

The powers of the Administrator were rigidly restricted in dealing with farm products; no ceiling could be established for any agricultural commodity below the highest level set by the following four separate criteria:

1. 110 percent of the parity price level, as defined by the Department of Agriculture.
2. The market prices of October 1, 1941.
3. The market prices of December 15, 1941.
4. The average price during the period July 1, 1919, to June 30, 1929.

Moreover, no ceiling could be issued for any agricultural commodity, even after complying with these criteria, except upon the prior approval of the Secretary of Agriculture.

The bill made no provision for the direct control of wages, but it did include a directive to governmental agencies dealing with wages

<sup>5</sup> Idem, pp. 989-1045.

<sup>6</sup> Orders in Council P. C. 8253 and 8527.

<sup>7</sup> The Emergency Price Control Act of 1942 (Public, No. 421, 77th Cong., 2d sess.).



to work toward the maintenance of fair and equitable wages and the stabilization of prices and costs of production.

While this bill was pending in Congress, the Office of Price Administration continued to issue ceilings for a wide range of commodities in an effort to stem the continued price advance. By mid-November 1941 approximately one-third of the wholesale price structure in terms of value was under formal or informal control (see chart, page 667). Nevertheless, prices in primary markets continued to creep upward, until just before the attack on Pearl Harbor they averaged 23 percent above their pre-war levels. The rise was most pronounced for farm products and for foods, with textiles not far behind.

#### AMERICAN ENTRY INTO THE WAR

With the active entry of the United States into the war, the market picture took a new and even more serious turn. In the first place, our customary sources of a wide range of imported raw materials, such as rubber, tin, coconut and tung oils, and manila fiber, were cut off almost entirely. Supply routes for other Far Eastern products, such as tea, burlap, shellac, and Australian wool, were seriously endangered. The scarcity of shipping became much more acute as bottoms were commandeered by the armed services; the situation was soon aggravated further by the submarine campaign in the Western Atlantic. General or localized shortages began to develop for almost all sea-borne products, including even domestic products such as gasoline and fuel oil whose distribution had depended upon coastwise shipping.

Even more important, the active entry of the United States into the war meant a huge immediate expansion of the scale of war production and correspondingly drastic curtailment of manufacture for the civilian market. Early in 1941, as mentioned above, the rate of production for civilian markets was showing the first signs of failing to keep pace with civilian purchasing power. By August 1941 civilian production for the first time turned definitely downward, and after Pearl Harbor the rate of curtailment was greatly accelerated.<sup>8</sup>

What this means in concrete terms can best be illustrated by the estimates of the so-called "inflationary gap" officially presented by the Office of Price Administration in connection with the issuance of the General Maximum Price Regulation on April 28:

A gap has appeared between the supply of goods and services which is available and the purchasing power or demand of the people who wish to buy these goods and services. This gap is widening. Both military and civilian demand have increased vastly in recent months. War expenditures, which totaled \$1,000,000,000 in March 1941 and \$2,000,000,000 in December 1941, rose to nearly \$3,000,000,000 in March 1942. In December 1942, on the basis of present authorizations, these expenditures will exceed \$6,000,000,000.

Civilian demand has its source in income payments to individuals by the Government and by industry. The rate of monthly increase in these payments has advanced from one-half of 1 percent in the months immediately following the outbreak of the war in September 1939, to 1 percent, to 1½ percent, and since March 1941 to 2 percent. There is evidence of a further acceleration in this rate of increase in the future.

The supply of civilian goods and services available for purchase from this income is diminishing. Manpower, materials, and machinery are being devoted to the production of planes, ships, tanks, and guns instead of to the production of civilian goods and services. The supply of such civilian goods and services will be progressively reduced by approximately 1 percent per month for the balance of this year.

<sup>8</sup> U. S. Office of Price Administration, First Quarterly Report, 1942, p. 27.



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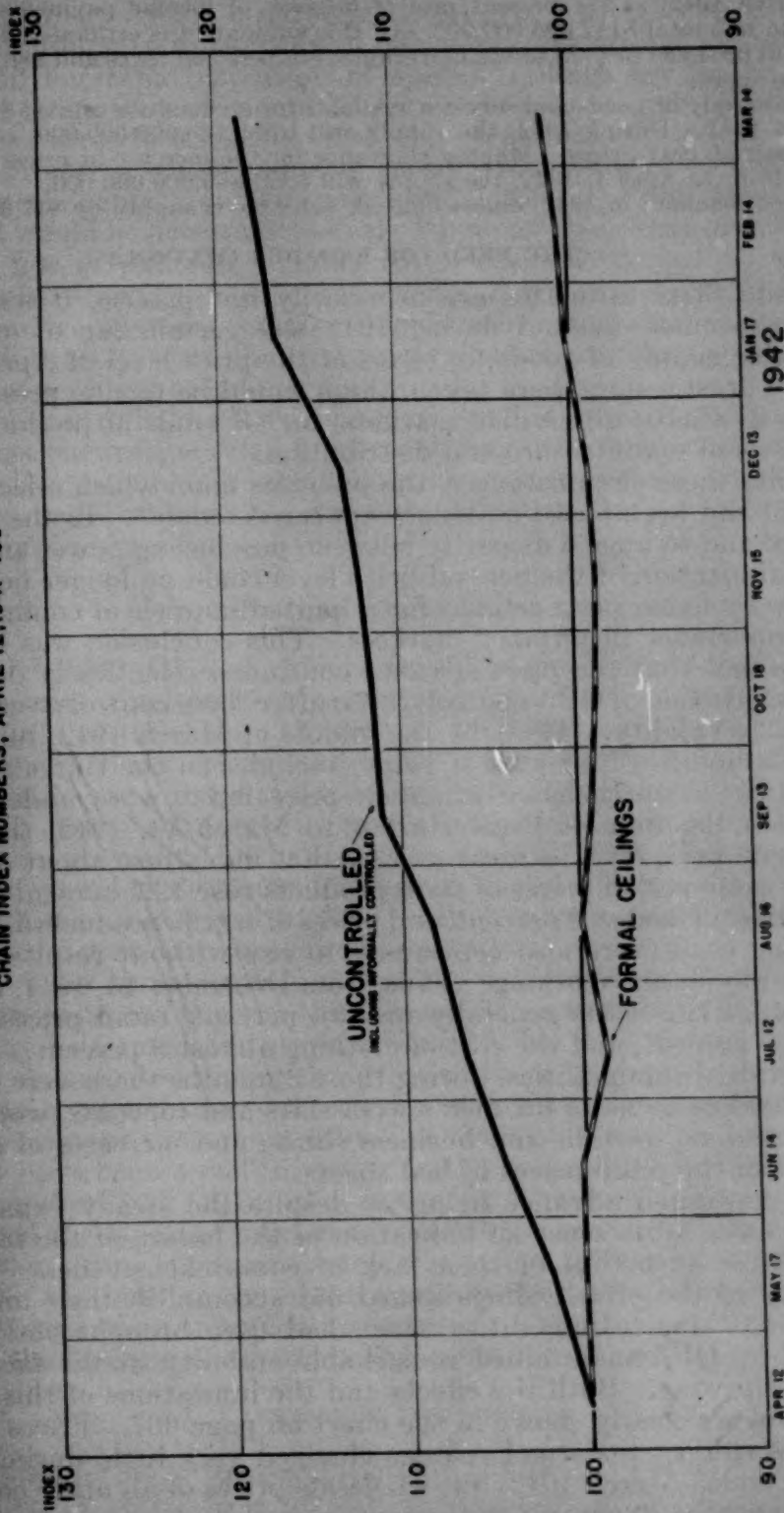
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The supply of civilian goods and services available for purchase from this income is diminishing. Manpower, materials, and machinery are being devoted to the production of planes, ships, tanks, and guns instead of to the production of civilian goods and services. The supply of such civilian goods and services will be progressively reduced by approximately 1 percent per month for the balance of this year.

<sup>8</sup> U. S. Office of Price Administration, First Quarterly Report, 1942, p. 27.

# PRICE TRENDS OF CONTROLLED AND UNCONTROLLED COMMODITIES

CHAIN INDEX NUMBERS, APRIL 12, 1941 = 100



UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

During 1941, it is estimated, individual income totaled \$92,000,000,000. Of this amount \$18,000,000,000 was accounted for by personal taxes and individual savings, and \$74,000,000,000 was spent on consumers' goods and services.

During 1942, at the present rate of increase of income payments, individual income will total \$117,000,000,000. Of this amount, it is estimated \$31,000,000,000 will be saved or paid to the Government in personal taxes and \$86,000,000,000 will be spent.

The supply of goods and services available for civilian use totaled \$74,000,000,000 in 1941. During 1942, the supply will total \$65,000,000,000, computed on the basis of 1941 prices. Making allowance for the increase in prices which took place prior to April 1, 1942, the supply will total \$69,000,000,000.

Thus, demand, in 1942, unless limited, will exceed supply by \$17,000,000,000.

#### THE NEED FOR BROADER CONTROLS

While these estimates are necessarily not precise, it was evident that consumer demand during 1942 was certain far to outrun the available supply of goods, in terms of the price level of April 1, 1942. Unless drastic steps were taken, there would be terrific pressure upon prices in almost all civilian markets, for all kinds of products and at all levels of manufacture and distribution.

Under these circumstances, the premises upon which selective price control had been based no longer appeared tenable. In the face of so general and so huge a disparity between purchasing power and supply, the stabilization of the general price level could no longer be achieved merely by fixing price ceilings for a limited number of commodities of key importance in primary markets. This conclusion was supported by the fact that the price advance continued relentlessly despite the rapid expansion of OPA controls, even after these controls were granted statutory validity. Thus, by the middle of March 1942, fully half of the commodities (in terms of value) included in the Bureau of Labor Statistics' comprehensive wholesale-price index were under control, yet from the time of Pearl Harbor to March 14, 1942, the general wholesale price level as measured by that index rose about 5 percent. In the same period prices of farm products rose 12.7 percent at wholesale, prices of foods 8.0 percent, and prices of textile products 5.7 percent.

Living costs were also continuing to rise without respite, particularly for foods and clothing. Thus, from December 15, 1941, to March 15, 1942, living costs generally rose  $3\frac{1}{2}$  percent, retail prices of foods nearly 5 percent, and the cost of clothing almost 8 percent. In terms of individual commodities, during those 3 months there were increases of 10 percent or more for men's wool suits and topcoats, work shirts, work trousers, overalls and business shirts, and increases of about 13 percent in the retail prices of bed sheets.

The continued advance in prices despite the steady expansion of controls was in no sense an indication of the failure of the individual controls, as such, but of their lack of comprehensiveness. A large majority of the price ceilings issued did accomplish their immediate purposes. Most commodities which had been brought under direct control by OPA maintained remarkable stability in the face of the general upswing. Both the effects and the limitations of this method of control are clearly shown in the chart on page 667. Prices of commodities subject to formal ceilings changed very little during the 12 months ended March 1942, but wholesale prices of all other commodities rose nearly 20 percent in the same period.<sup>10</sup>

<sup>10</sup> U. S. Office of Price Administration, *First Quarterly Report, 1942*, p. 218.

<sup>11</sup> The indexes in this chart were computed by the use of "link relatives." The rapid expansion of price controls during this period made this the only feasible method. While the precise interpretation of a chain index computed in this way is subject to a certain degree of ambiguity, it suffices to show in a general way the contrast in the behavior of controlled and uncontrolled prices.



In other words, the system of selective ceilings could hold down prices in certain individual markets, but it had proved to be utterly inadequate to meet the tremendous burden thrown upon the price control machinery by the rapid sequence of events after Pearl Harbor. The crucial difficulty in the way of effectively blanketing the market through further rapid extension of specific ceilings lay in the huge number of ceilings which would be required to do the job effectively. The ceilings already issued covered the great majority of the basic standard products whose value is reckoned in billions of dollars—such as steel, copper, cotton cloth, and lumber. From this point onward, it would be necessary to deal with many thousands of different products, few of strategic significance in themselves, but all highly important in the aggregate. Moreover, a large number of products still to be covered were complex, highly fabricated articles, such as apparel, difficult to describe in language sufficiently precise to form the basis of a ceiling order.

Even greater difficulties would be involved in extending control to the greatest part of the retail markets through the issuance of specific ceilings. For example, it would be necessary to make provision for differences between localities, between different kinds of stores and different types of service.

### *Comprehensive Price Regulation*

By March 1942, OPA officials had reached the decision that, whatever the merits of selective price control in a defense economy, it was not adequate to meet the challenge of total war. At best, it could retard the advance in prices and living costs somewhat, but it could not prevent them. It could not keep advances in prices from raising production costs, advances in production costs leading to further advances in prices and in living costs, and advances in living costs leading to justified demands for higher wages which would in turn raise production costs still further. Much more comprehensive and coordinated action was considered imperative.<sup>11</sup>

It was under these conditions that the decision was reached by the Price Administrator to issue the General Maximum Price Regulation which may be termed, for brevity, the GMPR. It appeared to afford the best chance of stopping the price advance promptly enough and on a wide enough front to avert the immediate danger of inflation. The apparent success achieved by Canada with a similar type of control may have been an added factor in the decision. The GMPR was issued on April 28, 1942, the day after President Roosevelt had announced the 7-point program to combat the increase in living costs. At the same time, the initial step was taken toward extending rent control to the bulk of the urban areas in the United States. These two measures were intended to implement the first of these seven points—the freezing of all prices and rents.

#### TERMS OF THE GMPR

The basic terms of the regulation are simple. No seller—producer, wholesaler, or retailer—is permitted to charge more for any of the products or services covered by the regulation than his highest price to the same class of consumer during March 1942. The March 1942

<sup>11</sup> U. S. Office of Price Administration, *First Quarterly Report*, 1942, pp. 24-30.

price must represent a completed transaction upon which delivery had actually been made; thus, if a manufacturer had raised his price near the end of the month and failed to deliver any products at the new price, his ceiling is to be based upon the level prevailing before the increase. Special provisions were made for articles which had not been on the market in March, or for which there had been no completed transaction during that month.

This general price ceiling supplemented but did not supplant the specific price ceilings which had been in effect earlier. Wherever there was a specific ceiling order, its terms governed, rather than those of the GMPR. Moreover, the regulation did not imply any abandonment of the issuance of new specific ceilings in the future or of the amendment of those already in effect. Since the effective date of the GMPR the OPA has issued a considerable number of specific ceilings wherever it considered that such ceilings would be more effective or more equitable than the general price "freeze."

By its very nature, however, the new order was not compatible with flexible ceilings of the types which had been in effect for cotton goods and yarns. Until the GMPR was issued, prices of these products were permitted to fluctuate with the movement in the price of raw cotton. Since raw cotton was exempt from the general ceilings, this situation could have endangered the price structure for the wide range of products made from cotton, particularly cotton clothing and housefurnishings. Consequently, on April 30, two days after the GMPR had been announced, the flexible ceilings for cotton yarns and cloth were replaced by fixed ceilings, which were independent of any further fluctuations in raw-cotton prices.

#### EXCEPTIONS TO THE REGULATION

Despite its wide scope the order included a number of very important exceptions. Most of these exceptions were made necessary by the terms of the Price Control Act, which limited the power of the Administrator to set ceilings for agricultural products. Ceilings for such articles could be set, as already mentioned, only after they had reached certain levels and even then only with the concurrence of the Secretary of Agriculture. As a result, all raw and unprocessed agricultural commodities or products of greenhouses were granted blanket exemption. (Bananas, all of which are imported, were, however, included since this fruit was not protected by the agricultural clauses of the act.) Eggs and poultry, and mutton and lamb<sup>12</sup> were also omitted. Since the act provided that ceilings for articles processed from agricultural commodities could be set only at levels compatible with those prescribed for the agricultural products, it was also necessary to exclude such products as flour, butter, condensed and evaporated milk, and certain dried fruits and vegetables. Other provisions of the act required the omission of books, magazines, periodicals, and newspapers.

In addition to these exceptions which reflected the terms of the act, the order included others based upon grounds of expediency. Thus, while prices of a number of fresh fruits and vegetables had reached levels so high that ceilings could be imposed lawfully, their seasonal character and their typical wide fluctuations in price, as well as in

<sup>12</sup> In July the price of lamb rose above the "floor" provided for agricultural commodities in the Price Control Act, and accordingly a maximum price schedule for this product was issued, effective August 10, at both wholesale and retail levels.

quality, were deemed to render their inclusion under the order impractical. For similar reasons, and because of their relatively minor importance in the market, other articles such as live animals, stamps and coins, precious stones, and antiques were also exempted.

As regards services, the GMPR covered only those rendered in connection with commodities, such as laundry, dry cleaning, and shoe repairing.<sup>13</sup> Personal services, such as those of beauty parlors or barber shops, as well as professional services, were omitted.

#### THE RETAIL SQUEEZE—PROVISIONS FOR ADJUSTMENT

It was fully recognized by those who drew up the order that many inequities and cases of severe hardship might result from the strict application of such a widespread regulation. In particular, it was anticipated that difficulties would arise because of the tendency of retail prices to lag behind those in wholesale markets, of wholesalers' prices to lag behind those charged by manufacturers, and of prices for finished articles to lag behind the trend of the raw materials entering into their production.

To some extent, this problem was minimized by the selection of March 1942 as the base period. Retail-price increases for many lines of merchandise had been considerably sharper during the first few months of 1942 than had those of wholesale prices, and as a result the potential "squeeze" for these products had been substantially reduced or even eliminated.<sup>14</sup> Thus, between December 1941 and March 1942 average prices for men's and women's shoes rose 3 percent at wholesale, but nearly 7 percent at retail. Similarly, wholesale prices for men's undershirts rose about 5 percent, while those at retail advanced nearly 18 percent. The average price for all canned goods increased more than 9 percent at retail, but only 5 percent at wholesale.

The very fact that so large a proportion of the wholesale-price structure had been placed under control prior to March itself had given retailers an opportunity to adjust their prices to those prevailing at earlier stages of distribution. This was true of such important and widely diversified products as refined sugar, tea, and percale bed sheeting, prices of which accordingly advanced considerably more at the retail level than at wholesale during the early months of 1942. The provision of the act that ceilings be based only upon transactions actually consummated by delivery was another step in the same direction. In many cases manufacturers who had increased their prices late in March were unable to point to any actual delivery, whereas in retail markets deliveries usually keep close pace with sales.

Nevertheless, it was recognized that cases of hardship would occur, and that provision would have to be made for their adjustment. Accordingly, two types of relief were provided in the regulation. The first of these, in clause 18-A of the order, was intended for the benefit of those retailers whose prices in March had been abnormally low in relation to those charged by their competitors. Such situations might occur, for example, where clearance sales had been held during the entire month, or where the retailer had continued his prices on the basis of inventory purchased much earlier, while his competitors had

<sup>13</sup> A supplementary regulation issued later specifically excluded 100 services, such as cigarette lighter repair, clock or watch repair, fountain pen and mechanical pencil repair, shoe shining, repair of bicycles, baby carriages, etc.

<sup>14</sup> U. S. Office of Price Administration, First Quarterly Report, 1942, p. 43.



adjusted to new replacement costs. Under such circumstances, if the retailer could prove both that his price was abnormally low in relation to those of his competitors, and that this situation was causing him real hardship, he was entitled to petition for a price increase to bring him in line with the level generally prevailing in his locality.

The second type of relief related to the far broader problem arising when retail prices of an article generally were out of line with those at earlier stages of distribution and manufacture. In such cases, the Office of Price Administration undertook to provide relief by inducing or requiring wholesalers and manufacturers to reduce their prices in such a way as to lessen the burden upon the retailer. In other words, if the price of a shirt at retail was too low in comparison with the ceiling price of wholesalers and manufacturers, steps would be taken to reduce the prices charged by the wholesalers and manufacturers to levels which would protect the retailer from loss. This process had been developed in Canada in connection with the operation of its general price-control order, where it was picturesquely termed "rolling back the squeeze."

There were, of course, inherent limits in the extent to which the "squeeze" could be "rolled back," particularly where the initial difficulty arose because of increases in raw-material prices over which OPA could exert no control. This might be the case, for example, where the basic raw material was agricultural in origin and exempt from OPA control. Difficulties might also arise from other sources, such as increases in costs of transportation or in labor costs, where again OPA's jurisdiction did not extend. At the time the GMPR was issued it had been hoped to handle cases of this sort by the use of subsidies which would permit the primary manufacturer to maintain a price level compatible with the general ceiling despite his increases in costs.<sup>16</sup> In some cases the same purpose could be accomplished by having the Government purchase the raw material in question and resell it to the primary manufacturer at a figure compatible with the price structure it was sought to maintain. However, the grant of subsidies in most, though not in all, cases required a specific grant of power by Congress; and by the end of September 1942 this had not been authorized.

#### SIGNIFICANCE OF THE GMPR

The immediate effect of the General Maximum Price Regulation was to extend price control to about 75 percent of the wholesale price structure in terms of dollar value, compared with the 50 percent which prevailed in March. The largest increase in coverage in wholesale markets was for finished consumers' goods, including most processed foods and a wide range of complex manufactured goods, such as apparel and housefurnishings. In industrial markets, particularly for metals, chemicals, building materials, and machinery, the increase in the scope of control was relatively small because most of these markets had been covered by specific price ceilings issued prior to April 28.

In the retail field the immediate increase in the scope of control was very much greater. There had been very few ceilings at retail prior to the issuance of the General Maximum Price Regulation. Subsequent to its issuance the greater part of the commodity sales

<sup>16</sup> U. S. Office of Price Administration, *First Quarterly Report, 1942*, pp. 44-46.



at retail was covered, with the very important exception that about 40 percent of the food bill of the average urban family was exempted for reasons which have already been described.

The issuance of the General Maximum Price Regulation must be interpreted not merely as an increase in the scope of control, but as marking also a significant change in its philosophy. Until its promulgation the specific ceilings which had been issued were under continual pressure, and many upward readjustments had been necessary.<sup>10</sup> After April 28, 1942, it became the stated policy of the Office of Price Administration to grant upward adjustments only in cases under the terms of clause 18-A, i. e., to individuals subject to unique hardship rather than to industries. Except in such cases of individual maladjustment it was proposed to alleviate cases of hardship by eliminating the cause of the hardship—that is, by reducing costs—rather than by raising prices.

Because of the time required for business men to become familiar with the terms of the regulation and to take steps to comply with its provisions, it did not become effective immediately upon its issuance; instead, it was to apply to all transactions at wholesale from May 11, and it became effective as to commodity transactions at retail on May 18. As to services at retail, the effective date was July 1.

### *Events After April 28, 1942*

#### SUPPLEMENTARY OPA ACTIONS

It had at no time been anticipated that the General Maximum Price Regulation could stand without considerable adjustment and amplification. It was recognized in advance that many supplementary regulations would have to be issued from time to time to take care of situations which could not be fully foreseen; that there would be many justified complaints of hardship to individual businesses which would require corrective action, and that the system of specific ceilings would have to be extended to many commodities better suited for that type of control. On the other hand, it had been hoped that the general price level could be kept substantially stable and that it would not be necessary to puncture the price ceiling at any important points.

Most of the price orders issued by OPA since April 28 have fallen into the first category; that is, they have been in the nature of amplifications and adjustments rather than general increases. For example, almost immediately after the regulation was issued, OPA was confronted with the difficult problem of making proper provision for seasonal merchandise which had been off the market in March. The problem was most acute in the case of apparel, such as summer, fall, and winter clothing. Several regulations were issued to take care of this situation. In general, these adopted the plan of maintaining the price lines which had prevailed during the preceding season but permitted some changes in quality and construction in order to take care of increased costs.

It also proved necessary to clarify the regulation with regard to new merchandise, that is, for products which had been introduced after March. Special formulas were devised for pricing a wide range

<sup>10</sup> For example, ceiling prices were raised for acetone, butanol, ethyl alcohol, raw cane sugar, cotton gray goods and combed cotton yarns, slab zinc and zinc scrap, etc.

of consumer goods and building materials whose quality and construction had changed since the regulation was issued. For a few articles, such as new models of household refrigerators and electric fans, specific maximum prices were set.

At the same time, OPA officials were confronted with the urgent need for handling complaints of individual hardship resulting from the regulation. Permission to increase prices was granted to a large number of individual retailers who were able to show that their March prices had been abnormal. Certain cases of the kind were encountered so frequently that blanket adjustment was provided. For example, retail milk dealers in New York were permitted to raise their prices above March levels because of evidence that there had been a price war in that area during March.

In cases involving general rather than individual maladjustments, the "roll-back" technique was utilized. For example, prices of men's and boys' clothing had been raised by manufacturers and wholesalers just before March and many retailers had failed to reflect these advances in their own ceiling prices. Accordingly, manufacturers' and wholesalers' prices of these articles were "rolled back" by requiring them to be based upon a period earlier than March. Prices of work clothing were subsequently "rolled back" also. Similar action was taken in the case of soap; prices of tallow and grease were reduced in order to hold down raw-material costs and permit soap manufacturers to maintain existing price levels. Packers' prices for beef and veal were reduced somewhat by providing that their ceilings should be based not upon the highest price for any transaction in March, but upon the lowest prices at which 30 percent of each type or grade was sold between March 16 and March 28, 1942. Other roll-back orders were issued for pine oil, scrap rubber, woolen and worsted fabrics, woven decorative fabrics, rayon yarn conversion, pickled sheepskins, refined lard, and other products.

The system of specific ceilings was also extended during the period from April to September. Maximum prices were set in approximately 100 regulations and amendments for other such diverse products as red-cedar shingles, wheat mill feeds, and cottonseed oil, where the General Maximum Price Regulation seemed inadequate or unfair in its application. Thus, to eliminate price disparities between sellers of cotton products, specific dollars-and-cents ceiling prices were substituted for individual manufacturers' ceilings on over 1,700 types of towels, blankets, and corduroys. The specific ceiling for red-cedar shingles was designed to eliminate unusual price relationships for different grades of the product prevailing in the March base period. A variety of reasons accounted for the other maximum price regulations.

The need for making all these different kinds of modifications and adjustments had been fully anticipated by OPA officials even before the General Maximum Price Regulation was issued. None of these changes conflicted seriously with the basic purpose of the regulation, which was to prevent any appreciable advance in the general price level from the peaks attained in March. On the other hand, it had been hoped to avoid raising prices on any broad scale or for any important product. In particular it had been hoped to achieve stability in the cost of living as a means of avoiding renewed pressure for wage increases that might lend new impetus to the inflationary spiral.

This stand was maintained at first, but some retreat was found necessary as the summer progressed. This was partly due to the continued advance in uncontrolled farm prices, resulting in higher production costs for many food products. Since the Office of Price Administration lacked the power to grant subsidies, upward adjustments in the price ceiling could not be escaped. The first important "puncturing" of the ceiling went into effect on July 29, 1942, when increases ranging from 15 to 25 percent were granted for the 1942 pack of canned fruits and berries. Similarly, it was found necessary to increase ceilings for frozen fruits and vegetables, and to exempt from the GMPR the 1942 crop and pack of peanuts and peanut butter. Likewise, announcement was made of forthcoming regulations which were expected to raise prices for jams, jellies, preserves, dried fruits, and raisins.

The broadest and most serious withdrawal of this kind was announced by the Office of Price Administration on August 11, when plans were revealed for relieving food wholesalers and retailers of a squeeze which had developed for a large number of articles. It was announced that maximum prices for an extended list of these products would be increased in mid-September. At the time it was predicted that this broad adjustment, whose details were temporarily withheld, would involve an increase of about 1½ percent in the food bill of the average family.

### *Price Trends Under the Regulation*

The limited time which has elapsed since the General Maximum Price Regulation went into effect in mid-May is clearly insufficient to permit any definite appraisal of its effects, or of the results of the rent regulations, most of which have gone into effect even more recently. These orders were so unprecedented in scope that the process of educating businessmen and the public generally as to their provisions and significance required much time and careful planning. As late as mid-September—5 months after the regulation was promulgated and 4 months after it went into effect—there appeared to be many retailers and far more consumers who were still uncertain as to their obligations and rights under its provisions. Moreover, the products exempted from the regulation are of critical importance to the price structure and the effect of these exemptions is only beginning to be fully evident.

Despite these limitations, two general inferences can be drawn from the statistics available. The issuance of the regulation has succeeded in halting in large part, at least temporarily, the advance in prices of those products subject to its provisions. This is shown in tables 1 to 3 inclusive, which indicate the trend of prices of basic commodities, of wholesale prices in primary markets, and of living costs since the outbreak of war in Europe. Thus, the average price of 28 basic commodities increased less than 1 percent from May 16 to September 19, 1942, whereas there was an increase of 29 percent in the 14 months preceding the issuance of the regulation and of 67 percent in the first 3 years of war. Wholesale prices generally, as measured by the Bureau of Labor Statistics' index of nearly 900 commodity series, rose only 0.8 percent from the week ending May 16 to that ending Septem-



ber 19, 1942, as compared with an increase of nearly 22 percent from March 15, 1941, to May 16, 1942. Moreover, even this small increase can be traced almost entirely to the continued advance in prices of farm products and of foods not subject to control; prices of all commodities other than farm products and foods actually declined 0.2 percent between May 16 and September 19.

However, the crucial test of the General Maximum Price Regulation and of the extension of rent control must be sought in the trend of the cost of living. Here, as shown in table 3, the advance has been substantially retarded but it has not been halted. In the 3 months from mid-May 1942 to mid-August, the cost of living in large cities in the United States rose 1.2 percent, or at the average rate of 0.4 percent per month. This compares with an increase of about 15 percent, or at the rate of slightly over 1 percent per month in the 14 months from March 15, 1941 to May 15, 1942.<sup>17</sup>

The persistent though slower advance in the level of living costs subsequent to the issuance of the General Maximum Price Regulation is largely the result of the continued advance in the cost of foods, which make up one-third of the budget of families of moderate incomes. Since May 15, food prices at retail have continued to rise at an average rate of more than 1 percent each month. This in turn reflects much sharper increases in the retail prices of those foods which are not controlled by the Office of Price Administration, notably fresh fruits and vegetables, eggs, and some dairy products. Retail prices for these foods not under control, which comprise about 40 percent of the food expenditures of the average family actually accelerated their advance after the GMPR went into effect. This is shown clearly in the chart on page 677. Average prices of these uncontrolled foods rose 10 percent from mid-May to mid-August, or about twice as fast as in the preceding 12-month period. While seasonal advances are usual in the summer for certain important foodstuffs, the general rise was much greater than usual. In contrast, prices of those foods which were under control declined 0.3 percent from mid-May to mid-August.

The outstanding success of Office of Price Administration regulation in holding down the cost of living appears to have been achieved in the field of rents. The decline of slightly more than 2 percent in 21 large cities combined from May 15 to August 15 reflects very large reductions in rentals in those 14 cities in which regulations actually went into effect. For example, average rent reductions between mid-May and mid-August amounted to 10 percent in Seattle, 8 percent in Birmingham and Baltimore, all crowded defense areas in which Federal controls were promptly imposed. In cities still free of control, rents were generally unchanged during the period or moved only narrowly.

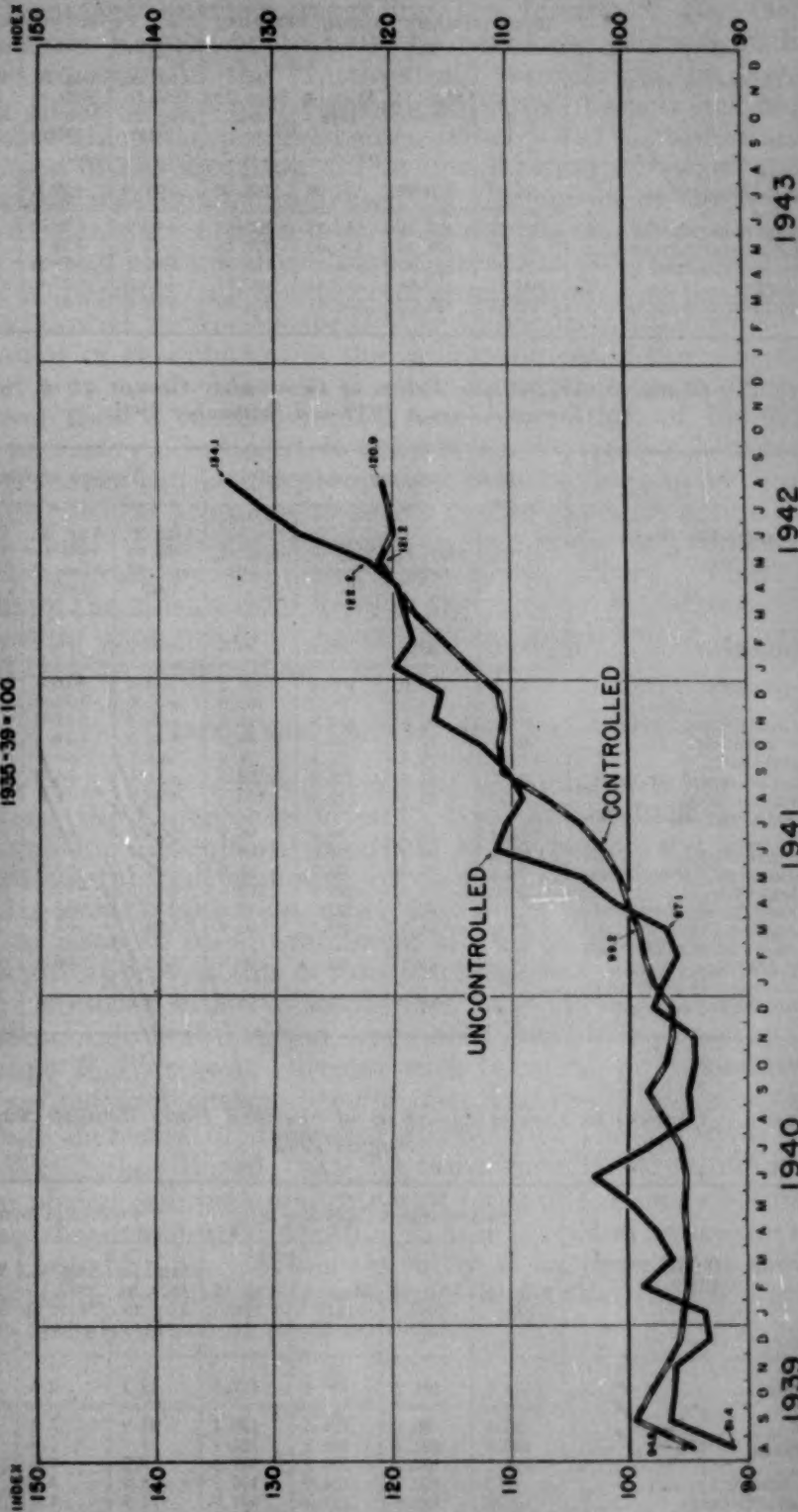
The General Maximum Price Regulation has also been successful in halting the increase in prices of clothing and of textile housefurnishings. In fact, the decline of 0.9 percent in clothing prices since May 15 may somewhat understate the case, since many retailers had reduced their prices even prior to May 15, anticipating the effective date of the regulation. On the other hand, certain reductions in August were attributable to late summer sales.

<sup>17</sup> See article on page 700 of this issue, for detailed account of changes in living costs.



# RETAIL FOOD PRICES CONTROLLED AND UNCONTROLLED

1935-39 = 100



UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

TABLE 1.—Changes in Wholesale Prices of 28 Basic Commodities as of Specified Dates Between August 1939 and September 1942

Commodity group	Index numbers (August 1939=100)				Percent of change from—			
	Aug. 26, 1939	Mar. 15, 1941	May 16, 1942	Sept. 19, 1942	Aug. 26, 1939, to Aug. 29, 1942	Aug. 26, 1939, to Mar. 15, 1941	Mar. 15, 1941, to May 16, 1942	May 16, 1942, to Sept. 19, 1942
28 Basic commodities.....	99.89	129.48	167.26	168.36	+67.3	+29.6	+29.2	+0.7
Imported commodities.....	99.77	137.78	162.22	162.63	+62.9	+38.1	+17.7	+3
Domestic commodities.....	99.97	124.38	170.60	172.18	+70.2	+24.4	+37.2	+9
Domestic agriculture.....	99.99	128.97	186.27	183.57	+82.4	+29.0	+44.4	-1.4
Foodstuffs.....	100.51	127.68	187.44	187.77	+85.5	+27.0	+48.8	+2
Raw industrial materials.....	99.44	130.72	153.41	154.99	+54.6	+31.5	+17.4	+1.0

TABLE 2.—Changes in Wholesale Prices of Commodity Groups as of Specified Dates Between August 1939 and September 1942

Commodity group	Index numbers (1926=100)				Percent of change from—			
	Aug. 26, 1939	Mar. 15, 1941	May 16, 1942	Sept. 19, 1942	Aug. 26, 1939, to Aug. 29, 1942	Aug. 26, 1939, to Mar. 15, 1941	Mar. 15, 1941, to May 16, 1942	May 16, 1942, to Sept. 19, 1942
All commodities.....	74.8	80.9	98.5	100.3	+32.2	+8.2	+21.8	+0.8
Farm products.....	61.1	70.9	104.3	107.1	+73.5	+16.0	+47.1	+2.7
Foods.....	66.7	74.3	98.2	102.0	+51.0	+11.4	+32.2	+3.9
Hides and leather products.....	92.6	102.8	119.8	118.6	+28.4	+11.0	+16.5	-1.0
Textile products.....	67.4	77.2	97.3	96.6	+43.3	+14.5	+26.0	-0.7
Fuel and light.....	73.2	72.6	78.8	79.6	+8.7	-8	+8.5	+1.0
Metals and metal products.....	93.5	97.8	104.0	103.9	+11.1	+4.6	+6.3	-0.1
Building materials.....	89.7	99.4	110.1	110.4	+23.0	+10.8	+10.8	+0.3
Chemicals and allied products.....	74.2	79.2	97.3	96.2	+29.6	+6.7	+22.9	-1.1
Housefurnishings.....	87.0	90.8	104.6	104.1	+19.7	+4.4	+15.2	-0.5
Miscellaneous commodities.....	73.1	77.0	90.2	88.6	+21.2	+5.3	+17.1	-1.6
Raw materials.....	66.2	74.5	98.9	101.5	+52.3	+12.5	+32.8	+2.6
Semimanufactured articles.....	74.4	82.7	92.8	92.8	+24.5	+11.2	+12.2	0
Manufactured products.....	79.3	84.0	99.3	100.4	+25.1	+5.9	+18.2	+1.1
All commodities other than farm products.....	77.8	83.1	97.2	97.6	+25.2	+6.8	+17.0	+0.4
All commodities other than farm products and foods.....	80.4	84.9	95.9	95.7	+19.0	+5.6	+13.0	-0.2

<sup>1</sup> Preliminary.

TABLE 3.—Changes in Cost of Living as of Specified Dates Between August 1939 and August 1942

Groups of family expenditures	Index numbers (1935-39=100)				Percent of increase from—			
	Aug. 15, 1939	Mar. 15, 1941	May 15, 1942	Aug. 15, 1942	Aug. 15, 1939, to Aug. 15, 1942	Aug. 15, 1939, to Mar. 15, 1941	Mar. 15, 1941, to May 15, 1942	May 15, 1942, to Aug. 15, 1942
All items.....	98.6	101.2	116.0	117.4	19.1	2.6	14.6	1.2
Food.....	93.5	98.4	121.6	126.1	34.9	5.2	23.6	3.7
Clothing.....	100.3	102.1	120.2	125.1	24.7	1.8	23.6	4.9
Rent.....	104.3	105.1	109.9	107.6	3.2	0.8	4.6	2.1
Fuel, electricity, and ice.....	97.5	100.7	104.9	106.2	8.9	3.3	4.2	1.2
Housefurnishings.....	100.6	101.6	122.2	121.6	21.1	1.0	20.3	-0.3
Miscellaneous.....	100.4	101.9	110.9	111.1	10.7	1.5	8.8	0.2

<sup>1</sup> Estimated.

## NEED FOR FURTHER ACTION—PRESIDENT ROOSEVELT'S MESSAGE

By the beginning of September there was increasing concern in many Government quarters regarding the failure of the General Maximum Price Regulation to halt the persistent increase in living costs. The adoption of the "Little steel" formula by the National War Labor Board, which based a wage adjustment upon the increase in living costs which had occurred since January 1941, emphasized the critical nature of the situation. The interrelation of wages and the price structure was further indicated by the action of the Office of Price Administration on September 9 in raising the price ceiling for wooden posts and certain other lumber products used in mines by an average of 20 percent, in order to compensate producers for increased wage rates allowed by the National War Labor Board decision. The announcement of this change in the ceiling indicated that the action represented a policy decision which could be regarded as a precedent.

Convinced that a more complete implementation of his 7-point plan was necessary, President Roosevelt on September 7 urged the Congress to enact legislation permitting price ceilings to be imposed upon all agricultural products at parity and to expedite action on the pending tax bill. President Roosevelt in turn undertook to round out his 7-point program by stabilizing the wage structure. These steps would plug up the most serious holes in the price control structure, and reduce pressure upon prices by narrowing the gap between purchasing power and civilian production.

## CONGRESS AMENDS THE ACT

In response to this request, Congress on October 2 approved an act to amend the Emergency Price Control Act of 1942, permitting price ceilings for agricultural products to be set at 100 percent of parity, with certain adjustments, or at the highest levels prevailing between January 1 and September 15, 1942. It also directed the President to issue an order stabilizing all prices, wages, and salaries. The President approved this act on the same day, and on October 3 issued an Executive order to implement it. This order created the Office of Economic Stabilization, appointed Associate Supreme Court Justice James F. Byrnes as Director with sweeping powers, stabilized prices of agricultural commodities at September 15 levels, and prohibited wage increases or decreases except with the approval of the National War Labor Board. At the same time Price Administrator Henderson placed ceilings upon prices of most of the foods which had hitherto not been under OPA ceilings, and extended rent control to the entire United States. While the effect of all these steps can only be determined in the future, there is little doubt that they will greatly strengthen the structure of price control.



# SHIPYARD INJURIES AND THEIR CAUSES, 1941<sup>1</sup>

By FRANK S. McELROY and GEORGE R. MCCORMACK, Bureau of Labor Statistics

## Summary

**DISABLING** work injuries cut heavily into essential manpower in the shipbuilding industry during 1941. A survey of the industrial injuries which occurred in 93 shipyards revealed that, for every million man-hours worked, 27 workers were disabled. About 0.6 percent of these injuries resulted in death or so incapacitated the workers as to make them unfit for further industrial activity; 4.9 percent left the injured workers with lesser permanent impairments; and 94.5 percent resulted in temporary disabilities lasting an average of 17 days each.

While shipbuilding workers are injured more frequently than factory workers generally, the shipyards have been able to hold their frequency rates below those in the particular group of industries that have the most comparable processes.

The most hazardous operations in the industry were those connected with erection on the ways, in which department the actual assembly and fitting together of the many parts comprising the hull of a ship takes place. These operations averaged 40.4 disabling injuries for every million man-hours worked. Other departments in the group

are not controlled by the Office of Price Administration, notably fruits and vegetables, eggs, and some dairy products. Retail prices for these foods not under control, which comprise about 40 percent of the food expenditures of the average family actually accelerated their advance after the GMPR went into effect. This is shown clearly in the chart on page 677. Average prices of these uncontrolled foods rose 10 percent from mid-May to mid-August, or about twice as fast as in the preceding 12-month period. While seasonal advances are usual in the summer for certain important foodstuffs, the general rise was much greater than usual. In contrast, prices of those foods which were under control declined 0.3 percent from mid-May to mid-August.

The outstanding success of Office of Price Administration regulation in holding down the cost of living appears to have been achieved in the field of rents. The decline of slightly more than 2 percent in 21 large cities combined from May 15 to August 15 reflects very large reductions in rentals in those 14 cities in which regulations actually went into effect. For example, average rent reductions between mid-May and mid-August amounted to 10 percent in Seattle, 8 percent in Birmingham and Baltimore, all crowded defense areas in which Federal controls were promptly imposed. In cities still free of control, rents were generally unchanged during the period or moved only narrowly.

The General Maximum Price Regulation has also been successful in halting the increase in prices of clothing and of textile furnishings. In fact, the decline of 0.9 percent in clothing prices since May 15 may somewhat understate the case, since many retailers had reduced their prices even prior to May 15, anticipating the effective date of the regulation. On the other hand, certain reductions in August were attributable to late summer sales.

<sup>1</sup> See article on page 760 of this issue, for detailed account of changes in living costs.



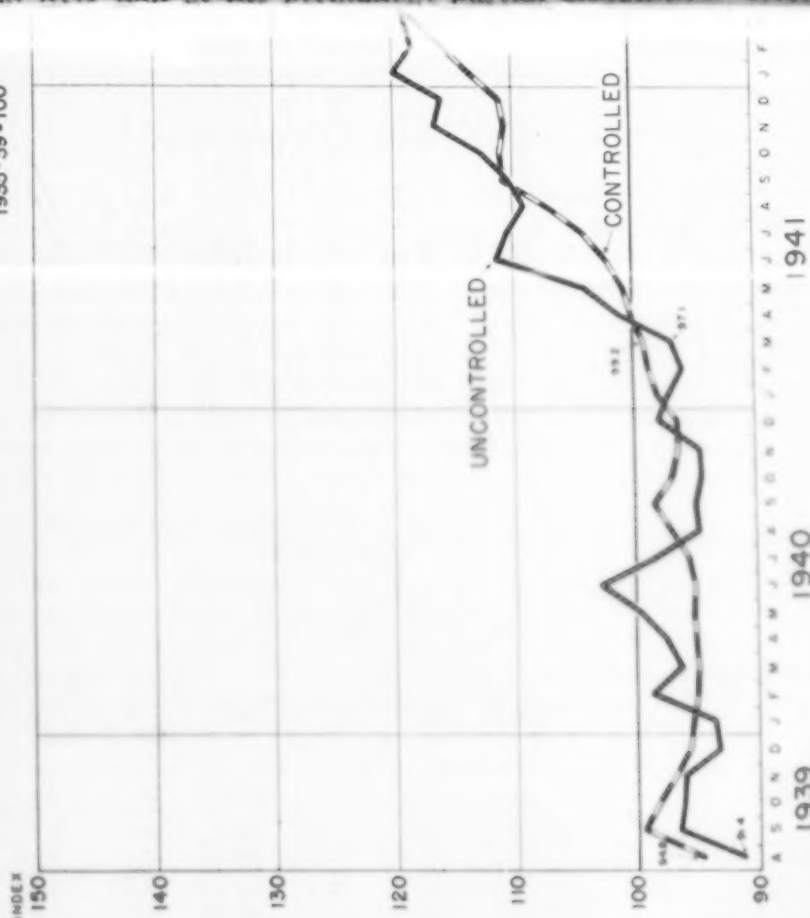
The shift-hour pattern of injury occurrence showed the peak of day-shift injuries to be in the third working hour, with a second and lesser peak appearing in the eighth hour. The evening and night shifts, on the other hand, had their greatest volume of injuries in the first working hour.

The limited volume of information available regarding the age distribution of shipyard workers gave some support to the common theory that injuries to older workers tend to be more severe than those experienced by younger persons. The evidence regarding the frequency of accidents by age of worker was inconclusive.

Injuries to the lower extremities were far more common than injuries to other parts of the body. Head injuries accounted for 21 percent of the total number of disabling injuries. In spite of the fact that nearly three-fourths of the head injuries consisted of eye cases, this group of injuries produced by far the greatest proportion of deaths among the cases for which such details were known. Finger injuries produced the greatest proportion of permanent partial disabilities. Abdominal injuries generally were the most severe kind of temporary injuries.

The most prevalent types of disabling injuries were strains, sprains, and bruises; cuts and lacerations; fractures; and burns or scalds. Skull fractures accounted for about 40 percent of the fatalities for which full details were available, and amputations, mostly of fingers, accounted for over half of the permanent partial disabilities. Hernia

# RETAIL FOOD PRICES CONTROLLED AND UNCONTROLLED 1935-39 = 100



UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

TABLE 1.—Changes in Wholesale Prices of 28 Basic Commodities as of Specified Dates Between August 1939 and September 1942

Commodity group	Index numbers (August 1939=100)				Percent of change from—			
	Aug. 26, 1939	Mar. 15, 1941	May 16, 1942	Sept. 19, 1942	Aug. 26, 1939, to Aug. 29, 1942	Aug. 26, 1939, to Mar. 15, 1941	Mar. 15, 1941, to May 16, 1942	May 16, 1942, to Sept. 19, 1942
28 Basic commodities.....	99.89	129.48	167.26	168.36	+67.3	+29.6	+29.2	+0.7
Imported commodities.....	99.77	137.78	162.22	162.63	+62.9	+38.1	+17.7	+3
Domestic commodities.....	99.97	124.38	170.60	172.18	+70.2	+24.4	+37.2	+9
Domestic agriculture.....	99.90	128.97	186.27	183.57	+82.4	+29.0	+44.4	-1.4
Foodstuffs.....	100.51	127.68	187.44	187.77	+85.5	+27.0	+46.8	+2
Raw industrial materials.....	99.44	130.72	153.41	154.99	+54.6	+31.5	+17.4	+1.0

TABLE 2.—Changes in Wholesale Prices of Commodity Groups as of Specified Dates Between August 1939 and September 1942

Commodity group	Index numbers (1926=100)				Percent of change from—			
	Aug. 26, 1939	Mar. 15, 1941	May 16, 1942	Sept. 19, 1942	Aug. 26, 1939, to Aug. 29, 1942	Aug. 26, 1939, to Mar. 15, 1941	Mar. 15, 1941, to May 16, 1942	May 16, 1942, to Sept. 19, 1942
All commodities.....	74.8	80.9	98.5	<sup>1</sup> 99.3	+32.2	+8.2	+21.8	+0.8
Farm products.....	61.1	70.9	104.3	107.1	+73.5	+16.0	+47.1	+2.7
Foods.....	66.7	74.3	98.2	102.0	+51.0	+11.4	+32.2	+3.9
Hides and leather products.....	92.6	102.8	119.8	118.6	+28.4	+11.0	+16.5	-1.0
Textile products.....	67.4	77.2	97.3	96.6	+43.3	+14.5	+26.0	-0.7
Fuel and light.....	73.2	72.6	78.8	79.6	+8.7	-0.8	+8.5	+1.0
Metals and metal products.....	93.5	97.8	104.0	<sup>1</sup> 103.9	+11.1	+4.6	+6.3	-0.1
Building materials.....	89.7	99.4	110.1	110.4	+23.0	+10.8	+10.8	+0.3
Chemicals and allied products.....	74.2	79.2	97.3	96.2	+29.6	+6.7	+22.9	-1.1
Housefurnishings.....	87.0	90.8	104.6	104.1	+19.7	+4.4	+15.2	-0.5
Miscellaneous commodities.....	73.1	77.0	90.2	88.6	+21.2	+5.3	+17.1	-1.6
Raw materials.....	66.2	74.5	98.9	101.5	+52.3	+12.5	+32.8	+2.6
Semimanufactured articles.....	74.4	82.7	92.8	92.8	+24.5	+11.2	+12.2	0
Manufactured products.....	79.3	84.0	99.3	<sup>1</sup> 99.4	+25.1	+5.9	+18.2	+0.1
All commodities other than farm products.....	77.8	83.1	97.2	<sup>1</sup> 97.6	+25.2	+6.8	+17.0	+0.4
All commodities other than farm products and foods.....	80.4	84.9	95.9	<sup>1</sup> 95.7	+19.0	+5.6	+13.0	-0.2

<sup>1</sup> Preliminary.

TABLE 3.—Changes in Cost of Living as of Specified Dates Between August 1939 and August 1942

Groups of family expenditures	Index numbers (1935-39=100)				Percent of increase from—			
	Aug. 15, 1939	Mar. 15, 1941	May 15, 1942	Aug. 15, 1942	Aug. 15, 1939, to Aug. 15, 1942	Aug. 15, 1939, to Mar. 15, 1941	Mar. 15, 1941, to May 15, 1942	May 15, 1942, to Aug. 15, 1942
All items.....	98.6	101.2	116.0	<sup>1</sup> 117.4	19.1	2.6	14.6	1.2
Food.....	93.5	98.4	121.6	126.1	34.9	5.2	23.6	3.7
Clothing.....	100.3	102.1	126.2	125.1	24.7	1.8	23.6	-0.9
Rent.....	104.3	105.1	109.9	107.6	3.2	0.8	4.6	2.1
Fuel, electricity, and ice.....	97.5	100.7	104.9	106.2	8.9	3.3	4.2	1.2
Housefurnishings.....	100.6	101.6	122.2	121.8	21.1	1.0	20.3	-0.3
Miscellaneous.....	100.4	101.9	110.9	111.1	10.7	1.5	8.8	0.2

<sup>1</sup> Estimated.

NEED FOR FURTHER ACTION—PRESIDENT ROOSEVELT'S MESSAGE

By the beginning of September there was increasing concern in many Government quarters regarding the failure of the General Maximum Price Regulation to halt the persistent increase in living costs. The adoption of the "Little steel" formula by the National War Labor Board, which based a wage adjustment upon the increase in living costs which had occurred since January 1941, emphasized the critical nature of the situation. The interrelation of wages and the price structure was further indicated by the action of the Office of Price Administration on September 9 in raising the price ceiling for wooden posts and certain other lumber products used in mines by an average of 20 percent, in order to compensate producers for increased wage rates allowed by the National War Labor Board decision. The announcement of this change in the ceiling indicated that the action represented a policy decision which could be regarded as a precedent.

Convinced that a more complete implementation of his 7-point plan was necessary, President Roosevelt on September 7 urged the Congress to enact legislation permitting price ceilings to be imposed upon all agricultural products at parity and to expedite action on the pending tax bill. President Roosevelt in turn undertook to round out his 7-point program by stabilizing the wage structure. These steps would plug up the most serious holes in the price control structure, and reduce pressure upon prices by narrowing the gap between purchasing power and civilian production.

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In response to this request, Congress on October 2 approved an act to amend the Emergency Price Control Act of 1942, permitting price ceilings for agricultural products to be set at 100 percent of parity, with certain adjustments, or at the highest levels prevailing between January 1 and September 15, 1942. It also directed the President to issue an order stabilizing all prices, wages, and salaries. The President approved this act on the same day, and on October 3 issued an Executive order to implement it. This order created the Office of Economic Stabilization, appointed Associate Supreme Court Justice James F. Byrnes as Director with sweeping powers, stabilized prices of agricultural commodities at September 15 levels, and prohibited wage increases or decreases except with the approval of the National War Labor Board. At the same time Price Administrator Henderson placed ceilings upon prices of most of the foods which had hitherto not been under OPA ceilings, and extended rent control to the entire United States. While the effect of all these steps can only be determined in the future, there is little doubt that they will greatly strengthen the structure of price control.

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While shipbuilding workers are injured more frequently than factory workers generally, the shipyards have been able to hold their frequency rates below those in the particular group of industries that have the most comparable processes.

The most hazardous operations in the industry were those connected with erection on the ways, in which department the actual assembly and fitting together of the many parts comprising the hull of a ship takes place. These operations averaged 40.4 disabling injuries for every million man-hours worked. Other departments in the group with relatively high frequency rates almost invariably were closely related to and subject to many of the hazards of hull construction. The operating departments having the lowest injury-frequency rates were nearly all concerned with fitting-out operations.

The electrical departments of the reporting yards did not have a particularly high injury frequency, but as evidenced by their high ratio of 1 death in 70 injuries, the probability that an injury would result fatally was much higher in those units than in any of the other operating department groups.

Generally speaking, it was safer to work in the very large shipyards than in the smaller plants. When grouped according to size of plant, the average frequency rates for the reporting yards varied almost directly from a high of 48.9, for yards of the smallest size, to a low of 17.4, for yards of the largest size. When considered geographically, the average frequency rates of yards on the Atlantic Coast, particularly in the South Atlantic area, were considerably lower than the average for any other region. The North Atlantic area, however, had the highest proportion of serious injuries among the various regions.

To supplement the general information supplied to the Bureau for the year 1941 by the large group of 93 shipyards, a detailed analysis was made of the individual records of 3,196 injuries, which occurred during the year in 11 of these yards. The detailed data were analyzed to determine the time of injury, the age of injured persons, the kinds of injuries experienced, and the causes of injury.

The detailed analysis indicated that injuries generally occurred less frequently in the summer months than in the fall, winter, or spring. Regular day-shift workers experienced a greater volume of injuries on Mondays than on any other weekday. Second- and third-shift injuries, however, reached peak volume on Fridays and Wednesdays.

<sup>1</sup> All of the tables showing the details upon which this discussion is based have been omitted to conserve space. The tables will be reproduced and available upon request.



The shift-hour pattern of injury occurrence showed the peak of day-shift injuries to be in the third working hour, with a second and lesser peak appearing in the eighth hour. The evening and night shifts, on the other hand, had their greatest volume of injuries in the first working hour.

The limited volume of information available regarding the age distribution of shipyard workers gave some support to the common theory that injuries to older workers tend to be more severe than those experienced by younger persons. The evidence regarding the frequency of accidents by age of worker was inconclusive.

Injuries to the lower extremities were far more common than injuries to other parts of the body. Head injuries accounted for 21 percent of the total number of disabling injuries. In spite of the fact that nearly three-fourths of the head injuries consisted of eye cases, this group of injuries produced by far the greatest proportion of deaths among the cases for which such details were known. Finger injuries produced the greatest proportion of permanent partial disabilities. Abdominal injuries generally were the most severe kind of temporary injuries.

The most prevalent types of disabling injuries were strains, sprains, and bruises; cuts and lacerations; fractures; and burns or scalds. Skull fractures accounted for about 40 percent of the fatalities for which full details were available, and amputations, mostly of fingers, accounted for over half of the permanent partial disabilities. Hernia cases, requiring an average of 51 days for recovery, were the most severe type of temporary injuries.

Accidents in which workers were struck by falling, flying, or moving objects produced more injuries than any other type of accident. Fatalities, however, resulted most frequently from falls from one level to another. Permanent partial disabilities resulted most frequently from accidents in which the worker was caught in, on, or between objects.

The metal parts from which ships are constructed constituted the leading agency with which injuries were associated, followed by flying particles, hand tools, and working surfaces. Accidents of the "struck by" type accounted for a majority of the injuries connected with each of these agencies, except working surfaces. Accidents involving working surfaces, on the other hand, were largely falls or slips.

The serious problem of housekeeping in shipyards is indicated by the fact that hazardous arrangement or procedure was a factor in over half of the accidents analyzed. This element of hazard was prominent in practically every division of the accident type and agency classifications.

Among the unsafe acts of persons, which contributed to the occurrence of injuries, that of taking an unsafe position or posture was most frequently involved in the accident cases analyzed. This type of unsafe procedure, which includes such specific acts as lifting with bent back, standing under suspended loads and exposure to falling or sliding objects, was prominent in all of the operating departments of the shipyards and was one of the leading causes of nearly all of the various types of accident.

Better supervision and intensified educational programs to stress safety fundamentals undoubtedly would do much to reduce the injury toll in shipbuilding. A great many of the reported injuries resulted directly from the violation of elementary safety principles, such as failure to wear goggles in the performance of chipping, reaming, and riveting operations; failure to wear hard hats when exposed to falling

objects; failure to warn workers in craneways before moving crane loads; running in congested areas; and improper use of tools or equipment. Nearly all of the reporting yards make some personal safety equipment available and recommend its use in particular occupations. Relatively few, however, make its use mandatory. Most of the larger yards maintain full-time safety departments, but even among these yards there were few which reported any organized method of instructing the supervisors and rank and file workers in safety fundamentals beyond a very limited lecture delivered at the time of the worker's initial employment.

### *Scope and Method of Survey*

*The industry record, 1941.*—The general section of this study is based upon summary reports received by mail from 93 shipyards, which were in actual operation throughout the major part of the year 1941. In order to secure as high a degree of comparability as possible in the types of operations and hazards included in this survey, the definition of shipbuilding as applied in this study has been somewhat modified from that regularly applied in the Bureau's annual surveys of injuries in all industries. In the regular annual surveys shipbuilding is defined<sup>2</sup> as the construction and repair of vessels of 5 gross tons or over. In this study, however, only yards which customarily construct or repair vessels of 150 feet or more in length have been included. The coverage of this study, therefore, is more limited than that of the annual survey, but the data are more uniform and comparable. None of the United States Navy Yards have been included.

The analysis applied in this section of the study is designed to indicate the relative frequency of injuries (a) in the various departmental divisions of the shipbuilding industry, (b) in shipyards of various sizes, and (c) in shipyards of various regions of the country.

*Detailed section.*—The detailed section of the study is based upon the original injury records of 11 shipyards which made their records available for analysis and transcription by Bureau agents. The yards cooperating in this part of the study were widely distributed. Two were in the North Atlantic area, two in the South Atlantic area, two in the Gulf area, four in the Pacific area, and one in the Great Lakes region. Each of these yards was engaged in the construction of comparatively large steel vessels. One yard was relatively new. The others had each experienced a tremendous expansion in recent years, but were all long-established units of the shipbuilding industry. The combined records of these yards included the details of 3,196 injuries which had occurred during 1941. As far as possible the same types of detail were taken from the records of each yard. In some instances, however, the particular details requested were not available. For this reason the number of cases analyzed in respect to particular accident factors varies considerably. All parts of the analysis, except that relating to injuries by age of worker, are based upon data from at least 9 yards. The analysis of these injuries follows the "American Recommended Practice for Compiling Industrial Accident Causes," approved by the American Standards Association, August 1, 1941.

<sup>2</sup> According to the Standard Industrial Classification, prepared by the Division of Statistical Standards of the U. S. Bureau of the Budget.

The analysis applied in the detailed section of this study was designed to indicate (a) the time of injury occurrence, (b) the relationship between injuries and the age of workers, (c) the kind of injuries that occurred, and (d) how the injuries occurred.

### *The Industry and Its Hazards*

Shipbuilding, as an industry, includes both the construction and repair of vessels. The yards or establishments comprising the industry range from small plants employing only a few workers to huge establishments employing more than 10,000 workers apiece. Generally the large yards are highly integrated plants, including within their organizations many sizable groups of manufacturing processes which are commonly considered as industries in themselves.

The actual construction of hulls upon the ways parallels the erection of structural steel for large buildings or bridges, and is subject to all of the hazards associated with building work, such as falls, or falling materials, and to all of the dangers associated with welding, riveting, and the handling of heavy materials. Fitting-out activities, which are commonly started before the hull leaves the ways and are finished in the fitting-out basin after launching, closely resemble the finishing operations involved in building construction, and are subject to similar hazards.

The fabrication of shapes and subassemblies is largely carried on in specialized shops within the yards. Employees of these shops, however, are frequently exposed to construction hazards, since much of their work must be done at the point of installation on or in the vessel. This is particularly true in fitting-out and repair work. Within the shops, workers are exposed to the variety of hazards associated with the particular industries which their activities represent. The yard departments vary considerably both in name and function from plant to plant, but commonly include units such as a machine shop, a wood-working shop, a fabricating shop, a paint shop, a foundry, a forge shop, a sheet-metal shop, and a mold loft.

In addition to the hazards normally existing in the industry, many new dangers to the lives and limbs of shipyard workers have arisen from the unusual operating conditions now prevalent. The great expansion of the industry has introduced large numbers of new and inexperienced workers into the yards. Many of these new employees had never before worked in any industrial establishment and were entirely unfamiliar with the hazards of their new occupations. Moreover the increasing opportunities for skilled workers throughout industry generally has resulted in a rising quit rate, thus depriving the shipyards of many of the experienced workmen upon whose advice and example much of the safety training for new men must depend. Highly indicative of the serious problem created by this situation was the comment of one safety engineer, who remarked, "The greatest hazard in this industry is the lack of trained supervisors." The growing necessity for rapid production also introduced an increased tempo of activity, crowded working conditions, and overtime work, all of which are commonly associated with increased possibilities for injury.

In comparison with other manufacturing industries, shipbuilding has generally had a somewhat higher injury-frequency rate than the average for all manufacturing industries. It has, however, consistently



held its frequency rate at a lower level than that of building construction, and below those in the forging, foundry, and fabricated structural-steel industries. Most of the large yards maintain safety departments, and these departments must be given much credit for their success in holding the average rate for the industry below that of the other major industries having comparable activities. In 1941, however, the average injury-frequency rate for all shipyards which reported to the Bureau for both 1940 and 1941 advanced 20 percent over that of the previous year.<sup>3</sup>

### *The Industry Record, 1941*<sup>4</sup>

On the average, there were about 27 disabling injuries for every million employee-hours worked during 1941 in the 93 shipyards included in this study. These injuries resulted in death or permanent total disability for 1 out of every 2,900 workers in the reporting plants; in permanent partial disability for 1 out of every 375; and in temporary disability, involving an average of 17 days lost time, for 1 out of every 19. Considering only the actual time lost by injured persons who were eventually able to return to work, the lost time in these plants averaged 1,051 man-days for every 1,000 workers. When the standard economic time charges for deaths and permanent impairments are included, the total economic cost of injuries in these plants rises to a total of 5,787 man-days for every 1,000 workers.

#### THE OPERATING DEPARTMENTS

*Injury frequency.*—The mechanical and construction departments, comprising the operating divisions of the industry, included 79 percent of the total labor force in the reporting yards and accounted for 85 percent of all injuries. As a group, these departments averaged 29.3 disabling injuries for each million man-hours worked.

Nearly a fourth of all the workers in the reporting shipyards were regularly employed in the industry's most hazardous department, erection upon the ways. It is interesting to note, however, that the frequency rate for this department, 40.4, was slightly lower than the national average frequency rate for building construction (41.8)<sup>5</sup>, and considerably lower than the average rate for the more analogous heavy-engineering construction industry (68.0).

Excepting only "erection upon the ways," the departmental organization of the reporting yards varied widely. Of the other types of departmental units, only the welding departments accounted for as much as 10 percent of the total employment. The blacksmith or forge shops were generally small, but they produced the second highest average frequency rate (36.5). Also in the high-frequency group were the boiler shops (33.7), the fabricating shops (33.7), the carpenter shops (32.8), and the welding departments (32.5). It was impossible to distribute the injuries charged to these departments according to the place at which the accident occurred. Since each of these departments is closely connected with erecting operations and much of their work must be done upon the vessels, however, it is reasonable to assume that the high injury rates in these divisions

<sup>3</sup> See report *Industrial Injuries in the United States During 1941*, based upon the Bureau's annual survey, covering industrial injuries in all industries (Monthly Labor Review, September 1942, p. 501).

<sup>4</sup> Based upon summary reports from 93 shipyards.

<sup>5</sup> See Monthly Labor Review, September 1942.

reflect not only shop hazards as such, but also considerable exposure to the greater general hazards prevailing upon the ways.

In the small number of yards which reported the operation of foundry departments, there was an average of 29.6 disabling injuries per million employee-hours of foundry work. This rate, was much lower than the national average of 47.0<sup>5</sup> for commercial foundries. The machine shops, most common of all the departmental units, had an average frequency rate of 21.2. Although all of the work of machine installation is done outside the shop, the workers in that department held their frequency rate to 20.9. Paint-shop employees, who also must work upon the hull, had a frequency rate of 20.8.

The operating departments in the lowest frequency-rate group were nearly all concerned with fitting-out operations. The pipe and sheet-metal shops had average rates of 17.2. The copper shops and the joiner shops had 15.7 and 15.5 injuries per million hours worked, respectively, while the electrical shops averaged 14.7, and the pattern shops averaged 10.3. The lowest average frequency rate among the operating departments was that of the mold lofts, 4.7.

*Resultant disabilities.*—Although the electrical departments, as a group, had a relatively low injury-frequency rate (14.7), as compared with the other operating divisions, the chance of an injury resulting fatally in these departments was nearly double that of any of the other departmental groups. One in every 70 disabling injuries experienced by the electrical workers resulted in death, compared with a record of about 1 in 125 for the carpenter shops, the machine shops, and the paint shops. Fatalities averaged about 1 in 167 disabling injuries in erection on the ways, but totaled less than 1 in 200 in the other departmental units.

Permanent partial injuries were relatively most frequent in the sheet-metal shops. More than 1 in every 10 of the disabling injuries reported in these departments produced some form of permanent impairment. The joiner shops, with an average of 1 permanent partial impairment in every 11 disabling injuries, and the carpenter shops, with an average of 1 in 12, however, had only slightly better records.

Cases involving the loss of one or more fingers were most frequent among the permanent-partial disabilities charged to each of the operating departments. The more serious permanent disabilities involving the loss of a hand, arm, foot, or leg, occurred in the ratio of 1 in every 3 cases of permanent partial disability in the pipe and joiner shops; 1 in every 4 in the machine shops and machine-installation departments; and 1 in every 5 in the fabricating, erection on the ways, and sheet-metal departments. Serious eye cases, involving the loss of sight in one eye, averaged 1 in every 9 permanent-partial disability cases in the sheet-metal shops, 1 in 12 in erection on the ways, and 1 in 16 in the machine shops. Surprisingly, the only cases involving permanent impairment of hearing were reported as occurring to employees of the welding department, which reported no permanent eye cases.

Temporary injuries generally were more severe in the woodworking shops than in any of the other departmental units. On the average, 34 man-days were lost for each temporary disability in the carpenter shops, and 25 man-days for each temporary injury in the related activities of the joiner shops. Temporary disabilities in the welding

<sup>5</sup> See Monthly Labor Review, September 1942.

departments, on the other hand, resulted in an average time loss of only 12 man-days.

#### SERVICE, MAINTENANCE, AND MISCELLANEOUS DEPARTMENTS

*Frequency.*—The service and maintenance departments, as a group, accounted for 14 percent of the total employment in the reporting yards, but were charged with only 7 percent of all the disabling injuries. The comparatively low average frequency rate of 12.6 for the group, however, reflected more the relative infrequency of injuries in the clerical, administrative, and drafting departments than it did a true picture of safety conditions in all departments of the group. Among general laborers the frequency rate (31.0) was above the average for the operating departments, and the rates for the maintenance (23.8), plant protection (22.9), transportation (24.2), and yards (26.1) departments were only slightly below the average in the operating departments. Administration and drafting are commonly considered to be activities subject to the same hazards as clerical work. In shipbuilding, however, the frequent necessity for employees in administrative and drafting jobs to visit the points of operations brings them into contact with many of the outside hazards. As a result, the frequency rate for administrative workers (3.8) was double that of the clerical group (1.9); and the average rate for drafting departments (2.3) was over 20 percent higher.

Activities, reported as miscellaneous and unclassifiable, many of which probably would form part of the operating group, included 7 percent of the total employment and 8 percent of all injuries, resulting in an average frequency rate of 29.8.

*Resultant disabilities.*—The possibility of an injury resulting in a serious disability was considerably higher in some of the service and miscellaneous departments than in any of the divisions of the operating group. Fatalities occurred in the high ratios of 1 in every 49 disabling injuries in the yards departments, 1 in 63 in the general labor departments, and 1 in 72 in the maintenance departments.

Permanent partial disabilities similarly resulted from a high proportion of the injuries experienced in these departments, reaching the very high ratio of 1 in every 8 in the yards departments, and were only slightly lower in the maintenance departments. Temporary injuries likewise tended to be rather severe in some of these departments. Employees of the administrative and toolroom departments, who were temporarily disabled, lost an average of 25 days each, while those of the general labor departments lost an average of 23 days each.

#### *Frequency by Size of Yard*

In shipbuilding, as in many other industries, the large establishments generally are safest. The average frequency rates for the 93 shipyards included in this study, when grouped according to size, varied from a high rate of 48.9 for yards having fewer than 250 employees to a low average of 17.4 for the largest yards with 10,000 or more employees. In sharp contrast to the averages, however, 10 of the 34 yards in the smallest size group, and 1 in the 500-1,000-employee group, operated throughout the year without a single disabling injury.

The more intensive specialization of work that is possible in the larger yards may help to account for their better safety record. The



individual worker has a better chance to become familiar with the hazards involved in his job when the range of his duties is limited.

Another factor that accounts for the superior safety record of the larger shipyards is the greater attention devoted to safety in these yards. In fact, the effect of organized safety activity within the various plants is nowhere more apparent than in this comparison of accident frequency by size of shipyard. Few of the small yards maintain safety departments or fully equipped first-aid stations. As a result, the safety programs of these plants are limited at best to part-time activities on the part of supervisors who may have had no specific safety training. Similarly, the immediate availability of skilled first aid or medical attention, which prevents many minor injuries from becoming lost-time cases, lends considerable advantage to the larger plants in a frequency-rate comparison.

Typical of the most effective safety and medical programs are the following brief outlines of the organizations within two of the largest yards.

Yard A: Yard has a safety department consisting of 4 full-time engineers. All new employees are given a safety lecture before going to work. Safety is stressed in all training courses. All injuries are investigated and analyzed statistically. Safety goggles are supplied and required to be worn for all welding, grinding, chipping, and drilling operations. A small hospital and 2 first-aid clinics, staffed by 5 doctors and 16 nurses, are maintained within the plant. The frequency rate for this yard was 11.1.

Yard B: A full-time safety engineering department is maintained. All new employees are given a safety lecture. Safety representatives are appointed among the workers in each department. Weekly plant and departmental safety meetings attended by worker delegates are held. Every lost-time accident is investigated and analyzed statistically. Employees who normally wear glasses are required to have safety lenses. Safety goggles or glasses are required in all eye-hazard operations. Safety shoes are required in the steel mill and recommended elsewhere. Three first-aid stations, staffed by a doctor, 3 first-aid men, and 4 nurses, are maintained in the yard. Serious cases are treated in a yard hospital, staffed with 8 doctors and a number of nurses. The 1941 frequency rate for this yard was 20.4.

### *Geographic and Operational Distribution*

On the average, disabling injuries occurred most frequently in the yards exclusively engaged in new construction, and least frequently in those engaged only in repair work. The latter group, however, was composed mainly of relatively small establishments, which were not equipped to undertake major hull repairs, and were, therefore, not subject to the comparatively great hazards connected with work upon the ways.

As a group, the 11 reporting yards located in the Gulf area had a much higher average frequency of injuries (50.1) than those of the other regions. The 20 yards reporting operations on the Pacific coast averaged 36 disabling injuries per million hours worked, while 13 yards in the Great Lakes area averaged 35.8. The Great Lakes yards, however, were generally much smaller establishments than those of the salt-water regions. The North Atlantic group, which included a

considerable number of the very large yards, and which accounted for 57 percent of the total man-hours reported in the study, had an average frequency rate of 22.6. As a group the 10 yards reporting from the South Atlantic area had an average frequency rate (15.7) lower than the average for any other region. Their individual rates, however, ranged from 0 to a very high rate of 83.1.

The North Atlantic area, with an average of over 8 cases of death and permanent disability among every 100 disabling injuries, had the highest proportion of serious injuries among the various regions. The Great Lakes area, however, with 1 death in every 90 disabling injuries had the highest fatality record.

### *Time of Injury*

#### MONTHLY RECORD

The year 1941 was one of continuous expansion in the 9 shipyards which furnished detailed monthly information. The number of employees and the monthly total of employee-hours worked in these yards more than doubled in the period from January to December. Reflecting much credit on the safety organizations of these particular yards, the volume of injuries in these plants did not increase at a much higher rate than did employment, as might well have been expected, but rather expanded at practically an equal rate. The monthly frequency rates for these yards, therefore, showed a surprisingly narrow variation. It is highly significant, however, that the frequency rates generally were lower in the period from May through August, when weather conditions were best for outdoor work, than they were in the winter, spring, and fall months. Similarly, the proportion of injuries resulting in death and permanent impairments reached its lowest point in the same period of good weather.

#### DAILY RECORD

The distribution of 2,429 injuries, which occurred in 11 shipyards, indicates that cumulative work fatigue, of the type which builds up day by day and is not completely overcome in the normal rest periods between workdays, was not an important contributing factor in shipyard accidents during 1941, despite the increased speed of operations and longer hours which characterized the industry during that year.

The volume of injuries on the regular day shift was much greater on Mondays than on any other day of the week, lending some support to the occasionally expressed theory that recreational pursuits on a day off are frequently more fatiguing than the day-to-day routine of heavy work to which workers have accommodated themselves. It is possible too, that even one day of dissociation with the hazards of daily work may be sufficient slightly to lessen the skill with which those hazards are avoided. The relative volume of injuries to first-shift workers declined successively on Tuesdays, Wednesdays, and Thursdays. Fridays showed a slight increase, hardly great enough to be significant. Saturdays showed a sharp decline, mainly as a result of the fact that Saturday was not a full workday for all employees.

The second, or evening shift, did not have a Monday peak of injuries. Tuesday injuries on this shift were more numerous than those occur-

ring on Mondays, Wednesdays, or Thursdays, but were less numerous than the Friday cases. Full employment upon the second and third shifts was not common during 1941 in the shipyards surveyed, and the total number of injury cases reported for these shifts was relatively small. The distributions for the evening and (particularly) for the night shifts, therefore, should be evaluated as being based upon rather small samples.

#### SHIFT-HOUR OF INJURY OCCURRENCE

The time-of-occurrence pattern, revealed by the distribution of 2,262 injuries reported in 11 yards, shows a striking similarity between the second and third shifts and a striking dissimilarity between these shifts and the regular day shift. On the day shift, injuries were most frequent during the third working hour; were least frequent in the fifth and sixth hours; and rose practically to third-hour volume again in the eighth hour.

The evening and night shifts, on the other hand, had their greatest volume of injuries in the first hour. The number occurring in the second and third hours declined somewhat, but remained relatively high. In the fourth hour the volume dropped decidedly, probably reflecting the reduction in activity during lunch periods. In each of the following three hours the number of cases remained relatively constant, but at a level below that of the second and third hours. In the eighth hour of both of the late shifts the number of injuries again fell to approximately the lunch-hour level. The high concentration of injuries in the first three hours of these shifts appears to indicate that many of the late-shift workers are not fully rested and properly alert to the hazards of the plants when they report for work. In considerable measure this condition may be due either to the difficulties of securing the full benefits of sleep during daylight hours, or to the fact that workers on these shifts must secure their recreation and attend to their personal affairs before going to work, rather than after work as is customary for day workers.

#### *Injuries and the Age of Workers*

A general distribution by age was available for only one of the shipyards visited. No general comparison to indicate whether or not age is an important factor in injury frequency could therefore be made. It was possible, however, to distribute 3,102 injuries, occurring in 11 yards, on the basis of the age of the injured persons and to indicate the types of resulting disability.

Although these data neither support nor weaken earlier findings,<sup>6</sup> which indicated that older workers are less likely to experience injuries than are younger workers, they do lend support to the previous conclusion that injuries to older persons are likely to be more serious than those experienced by younger persons.

The average time required for recovery from temporary disabilities increased directly with the age of the injured persons, particularly in the age groups above 30, and most pronounced in the age groups above 40. Specifically, the average recovery period for those of less than 30 years of age was about 15 days; for those of 30 to 40 years of

<sup>6</sup> See *Relation of Age to Industrial Injuries*, in *Monthly Labor Review*, October 1940 issue (p. 789) or Bureau of Labor Statistics pamphlet R. No. 1191.



age it was 17 days; and for those of 40 and over it was 19 days or longer. It is also pertinent in this connection that, among the injuries studied, there was an abrupt rise in the proportion of cases resulting in death and permanent disability as the age of the injured persons went above 35.

For one very large yard it was possible to obtain a distribution of employees according to age, as of January 15, 1942. Although the indications obtained from an age distribution for only one yard are insufficient as a basis for any general conclusions, it seems apparent that age was not a great factor in the general accident picture of this yard; disabling injuries occurred with practically the same frequency in all age groups. Occupational differences, particularly those resulting from the tendency to place older persons in positions requiring least activity, however, could not be taken into account in this comparison.

### *Kinds of Injuries Sustained*

#### **PART OF BODY AFFECTED**

Injuries to the lower extremities—toes, feet, and legs—accounting for 37 percent of the injuries for which details were available, were far more common than injuries to other parts of the body. Head injuries, of which nearly three-fourths were eye cases, accounted for 22 percent of the total number of disabling injuries; injuries to arms, hands, and fingers accounted for 20 percent; and injuries to the trunk accounted for 17 percent.

Leg, foot, and toe injuries were consistently prominent throughout the various operating departments. Eye injuries occurred with some frequency in nearly all of the operating departments, but reached outstanding proportions in the welding and erection on the ways divisions. In these two operating units, eye cases comprised 19 and 22 percent, respectively, of all disabling injuries. Head injuries, other than those affecting the eyes, were also relatively frequent in the welding departments, where they totaled about 10 percent of all disabling injuries, and in the paint shops, where they amounted to 15 percent. Injuries to the chest, back, or abdomen occurred in nearly all of the operating departments, but were of high relative importance only in the paint shops and pipe shops.

As the number of disabling injuries available for analysis in the service and maintenance departments was comparatively small, the proportionate distribution for these departments cannot be considered very stable. It is of interest, however, to note that for these departments as a group 25 percent of all disabling injuries were foot cases, 20 percent were leg cases, 14 percent were finger cases, and over 12 percent were back cases.

Head injuries, other than eye cases, produced by far the greatest proportion of deaths (7 in 200), but resulted in relatively few permanent partial disabilities. In direct contrast, over 27 percent of the disabling finger injuries resulted in permanent partial impairment.

The most serious temporary disabilities were those resulting from abdominal injuries. On the average, these cases each required 34 days for recovery. Temporary leg and arm disabilities also had comparatively long average recovery periods (22 and 21 days, respectively) reflecting largely the extended recuperative periods required in major

fracture cases. Temporary eye disabilities, on the average, required less time for recovery than did temporary injuries to any other part of the body.

#### NATURE OF INJURY

Of the 3,175 disabling injuries classified by nature of injury, 96 percent fell into 4 general classifications. In the operating departments as a group, 36 percent of all disabling injuries were strains, sprains, or bruises; 36 percent were cuts or lacerations; 15 percent were fractures; and 8 percent were burns or scalds. Relatively similar proportions prevailed in most of the major departmental divisions. The welding departments, however, had a much higher than average proportion of burns, and a lower than average proportion of fractures, while in the carpenter shops and machine shops the reverse situation prevailed. Cuts and lacerations constituted distinctly more than average proportion of disabling injuries in the blacksmith shops, the boiler shops, and the machine installation departments. Amputations were relatively most important in the fabricating shops, joiner shops, and sheet-metal shops.

The nature-of-injury pattern in the service and miscellaneous departments was generally comparable with that of the operating departments. Notable, however, was the fact that 45 percent of the disabling injuries charged to the transportation departments consisted of fractures.

*Resultant disabilities.*—Six of the 15 fatalities included among the 3,183 disabling injuries, for which both the nature of injury and the extent of disability were known, were the result of fractures of the skull. Amputations accounted for over half of all the permanent partial disabilities. About 4 percent of the fracture cases and slightly less than 2 percent of the cuts and lacerations also resulted in permanent partial disability.

Hernia cases generally required much more time for recovery than any other type of temporary injury (51 days on the average). Fractures, with an average of 37 days lost per case, constituted the second most serious type of temporary injury. The majority of the temporary injuries, including burns and scalds, cuts and lacerations, strains, sprains, and bruises, and cases of occupational disease, however, all had an average recovery period of about 13 days.

*Nature of injury and part of body affected.*—Nearly three-fourths of all the eye injuries were cuts or lacerations, which might well have been prevented through the use of safety goggles. Nearly all of the remaining fourth were burns, largely inflicted by radiations from welding apparatus. Of the head injuries, other than to eyes, about half were cuts and lacerations, a fourth were bruises, and about 14 percent were skull fractures.

Injuries to the lower extremities were largely of three general types—cuts and lacerations; strains, sprains, and bruises; and fractures. Strains, sprains, and bruises predominated among the leg and foot injuries, accounting for about half of the cases affecting each. Cuts and lacerations represented a considerably greater proportion of the leg injuries (39 percent) than they did of the foot cases (24 percent). On the other hand, fractures occurred with greater relative frequency (18 percent) among the foot injuries than among the leg injuries (10 percent). In direct contrast to the relatively low proportions of fractures among the leg and foot cases, two-thirds of the toe injuries

involved fractures. Most other toe injuries were cuts and lacerations (18 percent) or strains, sprains, or bruises (15 percent).

Finger injuries were largely (46 percent) cuts and lacerations, but included a high proportion of amputations (18 percent) and fractures (23 percent). Cuts and lacerations similarly predominated among injuries to the hands (44 percent), although fractures (16 percent) and sprains and bruises (29 percent) together accounted for a larger proportion. More than 1 in every 5 arm injuries (22 percent) were fractures; 32 percent were cuts and lacerations; and 35 percent were strains, sprains, or bruises.

Injuries to the trunk were largely strains, sprains, or bruises. Of all the chest injuries, however, 22 percent involved fractured bones; and more than a fourth of the abdominal injuries were hernia cases.

Infection following an injury was relatively uncommon except among the cases of cuts or lacerations to the extremities. Its high incidence among injuries of this type, however, is very indicative of the tendency to ignore what appear to be minor cuts and scratches. As a group, the cases of cuts and lacerations which developed infection produced an average time loss of 13 days each, compared with an average of 12 days each for those without infection. This difference in average time lost is highly emphasized when it is recognized that prompt and efficient first aid probably would have prevented the infections, and thereby would have kept many of these injuries from becoming lost-time cases.

### *Causes of Injury*

#### TYPES OF ACCIDENT

About 46 percent of the 3,139 disabling injuries for which details were available resulted from the injured persons' being struck by falling, flying, or moving objects. In each of the operating departments, except the mold lofts, accidents of this type occurred more frequently than any other disability-producing type of accident. Slips on level surfaces and overexertion, accounting for 16 percent of the injuries, constituted the second most prominent accident type, and similarly occurred in substantial numbers in practically every department.

Falls from one level to another, accounting for 11 percent of all injuries, and falls on the same level, accounting for 5 percent of the injuries, were relatively common in all of the departments which normally participate in work on the ways or in the vessels, but were particularly prominent in the electrical shops, paint shops, and machine-installation departments.

Contact with extreme temperatures (which produced about 4 percent of the injuries) occurred most frequently, as might be expected, in the foundry and welding departments. Accidents of the "caught in, on, or between" type, accounting for about 3 percent of the injuries, were most prevalent in the blacksmith shops, fabricating shops, joiner shops, machine shops, and sheet-metal shops. The inhalation of noxious fumes or gases in improperly ventilated work spaces, such as inside tanks or hold compartments, and the absorption of harmful radiations, particularly from welding apparatus, accounted for another 3 percent of the injuries. These types of accidents occurred



most frequently to workers in the welding and erection on the ways departments.

In the service and maintenance departments as a group, accidents of the "struck by" type were the most productive source of disabilities. A very high proportion of the injuries experienced by employees of the administrative and yards departments, however, resulted from falls, slips, and overexertion. Reflecting the necessity of handling heavy material and of working on and around closely and irregularly piled material in the stock yards and on the ways, cases of slips and overexertion similarly were frequent in the general labor departments.

Fatalities occurred with much greater frequency in the case of falls from one level to another than in accidents of any other type. Permanent partial disabilities, a very large proportion of which were cases of lost fingers, occurred in the exceptionally high ratio of 1 in every 5 disabling injuries resulting from accidents of the "caught in, on, or between" type, and with relatively high frequency in accidents of the "struck by" and "striking against" types. Similarly, accidents in which workers were caught in, on, or between objects produced the most severe temporary disabilities, although those resulting from falls from one level to another were also generally quite severe.

#### AGENCIES CAUSING ACCIDENT

Metal stock, including such items as the plates, rods, angles, and shapes from which ships are constructed, constituted the agency most closely involved in 27 percent of the injuries for which information as to agency of causation was available. More than half of the accidents in this group were of the "struck by" type. Also prominent among the metal-stock accidents were slips and overexertion and accidents of the "striking against" type.

Flying particles, mainly metal particles dislodged in welding, chipping, drilling, or riveting operations and grit blown through the outdoor working area of the yards by the winds prevailing in coastal regions, were the second most prominent injury agency, being involved in 10 percent of all the injury cases. In most cases these were eye injuries, which the use of goggles might have prevented. The resulting disabilities, however, were generally of a temporary nature, and, on the average, involved relatively short recovery periods.

Hand tools and working surfaces similarly were the agencies involved in relatively large proportions of the cases analyzed (8 percent each). The hand-tool accidents were largely of the "struck by" type. A large proportion of the accidents involving working surfaces on the other hand were falls or slips, particularly the staging accidents, which were largely falls from one level to another.

Among those accidents in which ship hulls under construction figured as the agency, accidents of the "striking against" type were most frequent, although falls, slips, and overexertion, and "struck by" accidents were each responsible for a considerable number of injuries. Ladder accidents were mainly falls, slips, or occurrences of the "striking against" type. Of the accidents in which lumber was classed as the agency, more than half were of the "struck by" type, 23 percent were the result of slips and overexertion, and 13 percent were of the "striking against" type.

Injuries in which cranes were involved produced the largest proportion of deaths related to any of the outstanding individual agencies.

Generally these were accidents in which the injured person was struck by the materials being lifted or moved by the cranes. The mechanical agencies, i. e., machinery, engines and pumps, hoisting apparatus, and conveyors, generally were prolific producers of permanent partial disabilities. The most severe temporary injuries, involving an average recovery period of 30 days, were those resulting from crane accidents. Those temporary injuries for which the agency was characterized as "radiations from welding apparatus" (i. e., cases of welders' flash) were on the average the least serious disabling injuries ascribed to any of the various agencies.

#### UNSAFE MECHANICAL OR PHYSICAL CONDITION

Serious problems in housekeeping are ever present in the ship-building industry. In work upon the ways much of the relatively limited space around and inside the vessel is necessarily occupied by staging. Similarly the necessity of keeping hatchways, and often portions of the deck itself, open for the delivery of material and equipment to the inside of the ship, limits the amount of space available for work or placement of materials. The air lines and cables connecting with every riveting hammer and every piece of welding apparatus extend in every direction over and through the hull. As a consequence the walkways and working spaces in, on, and about the hull are generally restricted and cluttered with material and equipment despite the best of housekeeping efforts.

Under normal conditions the yard areas present fewer physical problems than the ways. The expanded activity of the yards in 1941, however, necessitated vast increases in the stocks of material for which yard space had to be found, and required corresponding expansion in the activities and personnel of the yard shops and departments. In most instances this expansion in yard activities had to be accomplished without an increase in yard space. The resulting crowding of material and workers created many new housekeeping problems in the yard areas, and intensified the injury hazards attributable to poor housekeeping.

The importance of the housekeeping problem in relation to the prevention of injuries is strikingly indicated by the fact that of the 2,075 injury cases for which details indicating the unsafe mechanical or physical condition were available, over half were related to hazardous arrangement or procedure, meaning in most cases, "poor housekeeping." Typical of the injury-producing accidents included in this category were those resulting from tripping over obstructions in walkways and work spaces, and striking against or being struck by materials projecting or falling into walkways and work spaces.

A substantial proportion of the accidents classified as "falls to different levels" were also related directly to these housekeeping shortcomings.

Defective agencies, including such items as damaged or worn tools, improperly erected staging, and deteriorated cables and slings, were responsible for 13 percent of all the injuries. Such unsafe conditions figured as a cause factor in more than a fifth of the accidents classed as falls and in somewhat lower, but still important proportions of the "striking against," "struck by," and slips or overexertion types of accidents.

Improperly guarded agencies, such as open gears on machinery, staging without rails or toeboards, and unmarked deck openings, pro-

duced another 12 percent of the injuries. These improper or non-existing agency guards were also responsible for a considerable proportion of the accidents of the "caught in, on, or between" type, particularly those involving machinery as the agency, and a high proportion of those classed as "falls to a different level."

#### UNSAFE ACTS OF PERSONS

Analysis of the unsafe personal actions which contributed to the occurrence of 2,337 disabling injuries in 11 shipyards revealed that the act of taking an unsafe position or posture was a factor in just about half of all the cases. Included in this general category are the specific acts of lifting with bent back or while in an awkward position, standing under suspended loads, exposure to falling or sliding objects, standing or passing too close to openings, riding in an unsafe position, entering unsafe enclosures, and approaching too close to hazardous activities of others. The accidents resulting from these unsafe acts accounted for three-fourths of the fatalities resulting from the injuries analyzed, and produced about one-third of the permanent partial disabilities.

Over 80 percent of the accidents designated as "falls on the same surface," and 65 percent of those resulting from falls to different levels, were directly associated with the act of taking an unsafe position or posture. Similar unsafe actions were involved in 62 percent of the accidents classed as slips and overexertion and in about half of those in which the worker struck against or was caught in, on, or between objects. Far from being the peculiar failing of employees in particular departments or occupations, these personal faults figured largely in the accidents charged to all of the shipyard departments. The obvious implication, therefore, is that a generalized educational program to call the attention of all employees to the hazards connected with these unsafe acts might go far in the reduction of shipyard injuries.

Failure to use safe attire contributed directly to the occurrence of about 9 percent of all the injuries. Such negligence included failure to wear goggles in the performance of chipping, reaming, and riveting operations; failure to use hard hats when working in positions of exposure to flying or falling objects; failure to wear safety shoes or gloves when regularly assigned to the work of handling heavy, rough, hot, and awkward material; and the wearing of loose clothing around moving machinery. Accidents resulting from these unsafe acts were particularly prominent in work on the ways, in the blacksmith shops, in the fabricating shops, in the machine shops, and in the welding departments. Among the various accident types, failure to use safe attire was most important as a contributing factor in the types designated as inhalation, absorption, or ingestion, striking against, struck by, or contact with extreme temperatures.

Similarly, using unsafe equipment, using hands instead of equipment, or using equipment unsafely were factors in the occurrence of about 20 percent of all the injuries analyzed. These unsafe practices, arising largely from a lack of proper care or safety knowledge, were relatively common in all shipyard departments and produced a substantial number of the injuries charged to each of the general accident types. More than half of the injuries related to the use of hand tools, and an important proportion of those in which the agencies involved were given as machinery, working surfaces, ladders, lumber, or metal



stock, resulted either from using unsafe equipment or of using equipment unsafely.

Other types of unsafe acts, such as operating without authority, failure to secure or warn, operating or working at unsafe speed, and making safety devices inoperative, were not uncommon, but as a group accounted for only about 3 percent of the injuries analyzed. "Operating without authority" generally applied to the use of machines or mechanical equipment by persons other than the regular operators. "Failure to secure or warn," which resulted in a considerable volume of the "struck by" accidents, frequently involved such practices as the improper adjustment of slings, failure to block vehicles parked on inclines, failure to warn workers in the vicinity before lifting, lowering, or moving crane loads, and failure properly to post warnings regarding openings in walkways or work spaces or regarding hot substances and dangerous electrical contacts.

Operating or working at unsafe speed, including such specifically unsafe acts as running along congested walkways or upon scaffold platforms, resulted in a considerable volume of falls. The dangerous practice of making safety devices inoperative was most commonly connected with accidents involving machines, while unsafe loading or placing figured as a contributing cause in a substantial proportion of the injury cases involving lumber or metal stock.

## WAGES IN MILITARY-TANK ASSEMBLY SHOPS, AUGUST 1942<sup>1</sup>

STRAIGHT-TIME hourly earnings in army-tank assembly plants in August 1942 averaged \$1.14. Earnings in the various occupations ranged from 65.6 cents to \$1.32 per hour. These findings were the result of a study made by the Bureau of Labor Statistics at the request of the National War Labor Board, covering wages by occupation. The survey was confined to assembly operations, and did not include the fabrication of tank parts. The data were used to aid in the settlement, through collective bargaining, of a wage dispute at an important army-tank assembly shop.

The basic information was obtained in a survey made in the spring of 1942, but the data have been adjusted to reflect the wage situation as of August 1, 1942, and figures for an additional plant have been added.<sup>2</sup> The information in the present article, in short, covers several thousand<sup>3</sup> daylight-shift workers employed in 5 representative army-tank assembly shops, and mirrors the wage picture as of August 1942.

### *Creation of Military-Tank Industry*

The United States did not possess a military-tank manufacturing industry of any significance when the present world conflict began. Indeed, it was not until the German mechanized divisions swept over France and the Low Countries that the urgent need to build such an industry became manifest. The creation of a mass-production tank industry, therefore, began little more than 2 years ago.

Responsibility for the achievement of the necessary production was given largely, although not entirely, to the locomotive and railroad car building industry and to the automobile industry. In both industries substantial problems of a technical nature have had to be overcome. However, the experience of locomotive manufacturers with the machining, riveting, and welding of heavy steel plate and steel castings was advantageous, and such manufacturers possessed many of the machine tools and the crane facilities needed for tank construction. Work to close tolerances is also characteristic of locomotive building. Moreover, the spot or station type of assembly is well known to both locomotive and railroad car builders, and it is this type of assembly line that is of primary importance in the modern tank arsenal.

There is no need to stress the experience of the automotive industry in the rapid assembly of intricate power vehicles. Although large differences obviously exist between even a light tank and an automobile or truck, automobile manufacturers were able rapidly to adapt a portion of their facilities to the construction of armor-plated fighting machines. Considering the fact that much equipment had to be redesigned and new equipment built, this new type of production appears to have progressed swiftly.

<sup>1</sup> Prepared in the Bureau's Division of Wage Analysis, by H. M. Douty with the assistance of William H. Weldowke.

<sup>2</sup> One of the plants originally studied was engaged in the assembly of a half-track armored car. Data for this plant are not included in this article.

<sup>3</sup> The exact number of workers covered by the survey is not given because of the military nature of the product.

The 5 army-tank assembly shops for which data are set forth in this article are found in both the locomotive and automotive industries. The former industry, however, is more heavily represented than the latter.

### *Earnings, by Occupation, in Tank Assembly*

Since the large-scale manufacture of army tanks is new, methods of manufacture have not been highly standardized. In general, jobs are not yet very clearly defined and some of the plant wage structures reflect this fact. The occupational wage data in this article were obtained on the basis of occupational descriptions relating to one assembly shop. It was often necessary for the field representatives of the Bureau to observe the work in the other assembly shops, and to call upon shop managers and foremen to assist in establishing occupational comparability.

To avoid the problem of shift-differential pay, the study was confined to workers employed on the first daylight shift. Punitive payments for overtime were removed in all cases from the earnings data. The figures given, therefore, represent occupational earnings on a straight-time basis.

The basic wage data derived from the survey are shown in the accompanying table. As there shown, hourly earnings on a straight-time basis for all of the daylight-shift workers covered averaged \$1.14. Average hourly earnings in the individual occupations ranged from 65.6 cents for common laborers to \$1.32 for riveters.

Hourly earnings averaged less than \$1.00 in 10 of the 26 occupations shown in the table, but these occupations contained only 13.6 percent of the workers covered. In 7 occupations containing 47.4 percent of the workers, average hourly earnings exceeded \$1.20. For class A fitters, the occupation numerically most important, the average was \$1.22.

*Straight-Time Average Hourly Earnings by Occupation, in Army-Tank Assembly Shops, August 1942*

Occupation	Percent of workers covered by survey	Average hourly earnings	Occupation	Percent of workers covered by survey	Average hourly earnings
Adjustment and test mechanics.....	1.8	\$1.205	Laborers.....	3.1	\$0.656
Bolters.....	.6	.918	Motor mechanics:		
Carpenters, grade A.....	.5	1.182	Grade A.....	2.9	1.241
Crane operators.....	.7	.955	Grade B.....	.1	.994
Electricians:			Painters:		
Grade A.....	4.3	1.281	Grade A.....	3.1	1.281
Grade B.....	1.4	.945	Grade B.....	1.1	.968
Fitters:			Pneumatic-tool operators.....	20.4	1.154
Grade A.....	30.2	1.224	Receivers.....	1.2	1.870
Grade B.....	2.2	1.090	Riveters.....	2.4	1.322
Grade C.....	.9	1.021	Rivet heaters.....	1.7	1.183
Helpers.....	4.5	.796	Stickers.....	.7	1.130
Holders-on.....	2.8	1.309	Storekeepers.....	.2	.776
Hookers-on.....	.6	.997	Tank washers.....	.4	1.145
Installation mechanics:			Total.....	100.0	1.141
Grade A.....	5.9	1.153			
Grade B.....	6.3	1.018			

<sup>1</sup> Data relate to fewer than 3 plants.

Considerable variation in earnings among plants is concealed in these occupational averages. In some occupations the range in



earnings among plants is relatively wide. Variations in method of wage payment are no doubt responsible for some of the interplant differences in occupational wage levels. Differences in local labor-supply conditions may also constitute a factor.

It must be emphasized that not all of the occupations shown in the table were found in all 5 of the assembly shops. Thus, in several plants, the job of hooking-on is done by the fitters. In one plant the lumber for building bulkheads is sawed to length by the bolters, and no carpenters as such are employed. Rivet sticking is done by the heater in some plants. In several plants there is no differentiation between fitters and helpers; that is, there is no group of workers who perform helper functions exclusively and who are paid accordingly. At the time of the survey, only one of the plants studied was making a welded tank, and hence data for welders are not included.

### *Other Wage Characteristics*

Wage-payment methods differed among the plants covered. In 2 of the 5 plants, payment was by the hour in all occupations. In the remaining 3 plants, incentive methods of wage payment were employed where practicable. In 2 of the plants using such incentives, earnings were measurably higher in most occupations than in the 2 plants in which payment by the hour was used throughout.

Two of the 5 plants were being operated on a one-shift basis at the time of the wage survey, although in both of these plants the single regular shift exceeded 40 hours per week. Two of the 3 plants operating more than one shift paid premium rates to workers on the second and third shifts. In one of these plants the shift differential amounted to 5 percent of regular earnings, and in the second plant to 10 percent. In another plant, workers on the third shift were given 8 hours' pay for 7 hours' work.

All 5 plants pay time and a half for hours worked in excess of 8 per day or 40 per week. At the time of the survey, all work on Saturday, Sunday, or on holidays was compensated for at the rate of time and a half in 3 plants. Double time was paid in 2 plants for Sunday and holiday work, and one of these plants paid double time for work on Saturday afternoon.

## SPENDING AND SAVING OF THE NATION'S FAMILIES IN WARTIME <sup>1</sup>

THIS is the second article presenting data on distribution of income among a cross section of the Nation's families and the way in which those funds are spent or saved. It combines data for rural families, both farm and nonfarm, with those for city families. Separate information for city families was presented in the Monthly Labor Review for September 1942 in an article entitled, "Income and Spending and Saving of City Families in Wartime."

Changes in American economic life since the outbreak of war in Europe in September 1939 have probably been as drastic and as rapid as in any other period of our Nation's history. In the 2 years ending with April 1942, the number of persons employed had increased by 5.6 millions, unemployment had dropped to 3.0 million persons, and income payments to individuals had expanded by 34.4 billion dollars, an increase of 46 percent. From the time of the battle of Dunkerque and the fall of France in June 1940 to April 1942, the total war contracts let by the Federal Government had exceeded 112 billion dollars and total Federal Government spending had reached the rate of 3¼ billion dollars per month. The volume of bank deposits and indexes of retail sales were well above 1929 levels. At the same time materials were being rapidly diverted from consumers' goods into military channels, with consequent growing scarcity of goods available to the general population.

Such far-reaching developments can not take place without great changes in customary peacetime buying and living habits of civilians. At the same time, with larger funds than ever before in the hands of would-be purchasers, and with no corresponding increase in the supply of consumer goods and services, the possibility of competitive bidding and rapid price advances becomes a grave danger to the economy. In 1941 and early 1942 it became increasingly clear that unless taxes, savings, or some other form of deferred purchasing power could drain off excess funds, prices were likely to give rise to an inflationary spiral despite programs of price control and rationing.

These general developments made it especially important to have actual data regarding the amounts by which family incomes were increasing and the ways in which these added funds were being spent. Accordingly, the Bureau of Labor Statistics and the Bureau of Home Economics of the Department of Agriculture undertook concurrent studies of the incomes, spending, and saving of city and rural families.

### *Source of Data*

These national estimates of the volume of spending and saving by American families are based upon two field surveys, conducted in the spring of 1942. Agents of the Bureau of Labor Statistics interviewed city families and single consumers in 62 cities, and agents of the Bureau of Home Economics of the U. S. Department of Agriculture visited farm and rural nonfarm families and single consumers in 45 counties. The data cover the year 1941 and the first quarter of 1942. The results of the two surveys have been combined by the cooperating

<sup>1</sup> Prepared in the Bureau's Cost of Living Division by Alice C. Hanson and Jerome Cornfield.

Bureaus<sup>2</sup> to yield a set of Nation-wide estimates for all consumers. A more detailed statement on the nature of the surveys and the methods used will be found in the earlier report.<sup>3</sup>

### Increase in Incomes

The income of the typical family<sup>4</sup> in the United States, illustrates the changes which took place from 1941 to the first quarter of 1942. Such a family had a money income in 1941 of \$1,480; by the first quarter of 1942 this had risen by 4 percent to \$1,540, figured at an annual rate. One-half of the Nation's families in each period had smaller money incomes.

The general nature of the increase in family income during the course of this war period is indicated by table 1. The latest pre-war period for which comparable figures are available is 1935-36. At that time, the greater part of American families were receiving incomes concentrated at the lower levels. More than half had cash incomes below \$1,000, compared with somewhat over a third in 1941; almost three-fourths had cash incomes below \$1,500, compared with one-half in 1941; and less than one-sixth had incomes above \$2,000, in 1941 more than one-third. Incomes as a whole again moved upward from 1941 to the first quarter of 1942 despite the normal seasonal low in cash farm incomes in the first quarter of the year (see chart 1).

TABLE 1.—Percentage Distribution of Aggregate Income and Aggregate Expenditure of Consumers by Money Income, 1935-36, 1941, and 1942<sup>1</sup>

[Preliminary national estimates including both urban and rural consumers<sup>2</sup>]

Net money-income class	All families <sup>3</sup>			Aggregate consumer money income			Aggregate consumer expenditure		
	1935-36	1941	1942 <sup>1</sup>	1935-36	1941	1942 <sup>1</sup>	1935-36	1941	1942 <sup>1</sup>
0 to \$500.....	25	16	16	5	2	2	8	4	4
\$500 to \$1,000.....	28	19	16	15	7	5	18	8	7
\$1,000 to \$1,500.....	20	16	15	18	9	7	20	11	10
\$1,500 to \$2,000.....	11	14	14	15	12	9	15	13	12
\$2,000 to \$3,000.....	10	20	20	17	24	20	17	26	24
\$3,000 to \$5,000.....	4	10	13	11	18	19	10	18	21
\$5,000 and over.....	2	5	6	19	28	38	12	20	22
Total.....	100	100	100	100	100	100	100	100	100

<sup>1</sup> Annual rate for 1942 based on first quarter.

<sup>2</sup> Prepared by the Bureau of Labor Statistics and Bureau of Home Economics in cooperation; final estimates based on comparisons with data available from other Government sources are in process of preparation by the two agencies.

<sup>3</sup> Includes families of 2 or more persons and single consumers.

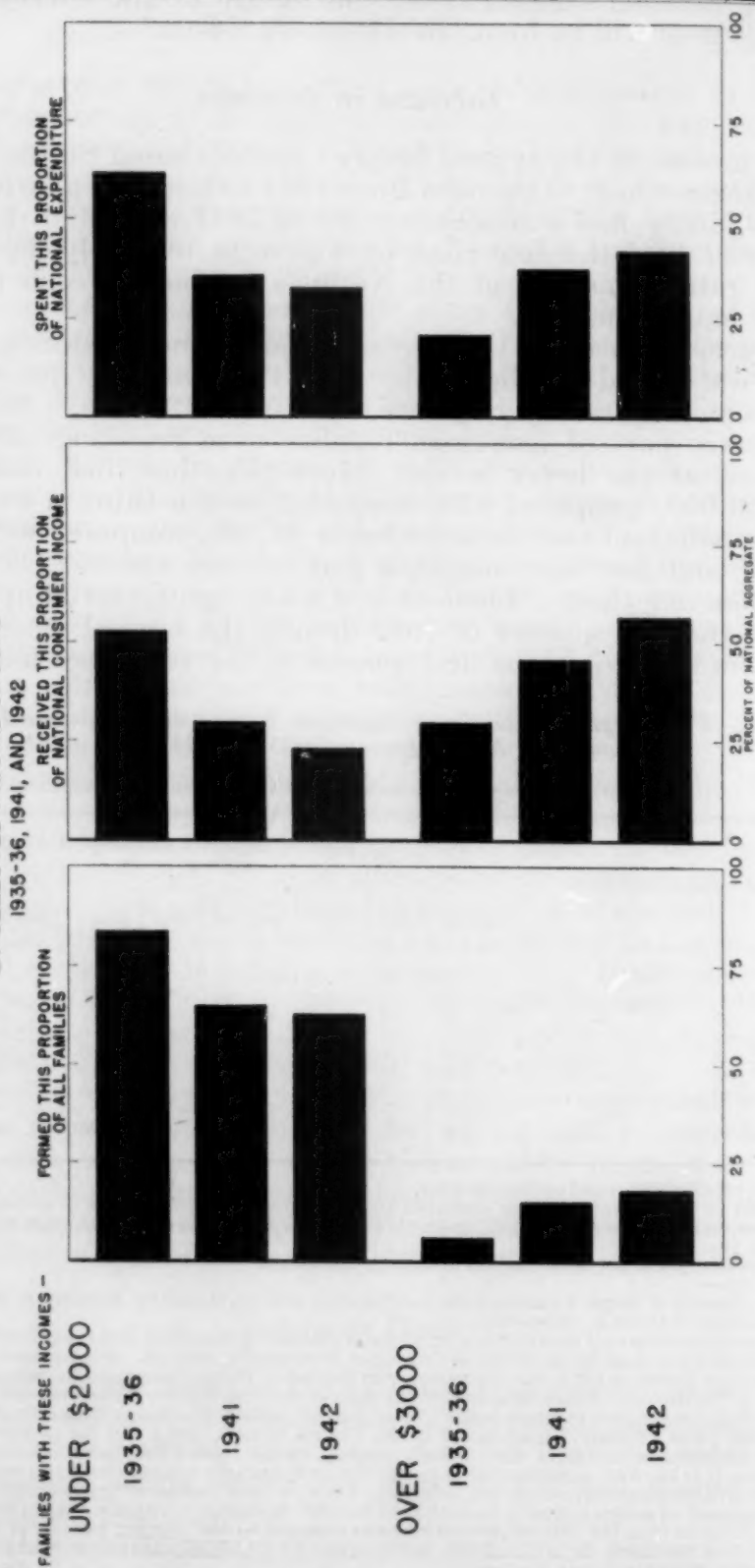
<sup>4</sup> For the Bureau of Home Economics the combination was developed by Dorothy S. Brady under the general direction of Hazel K. Stiebeling.

<sup>5</sup> The general procedures of interviewing, editing and tabulating of returns, and general definitions of terms are the same as those used in the Study of Consumer Purchases in 1935-36. (See appendixes to Bureau of Labor Statistics Bulletins 642 to 649, inclusive, or to Bureau of Home Economics Bulletins from the Study of Consumer Purchases). Those data formed the basis of the three reports of the National Resources Committee entitled, "Consumer Incomes in the United States" (1938); "Consumer Expenditures in the United States" (1939); and "Family Expenditures in the United States" (1941). In the present report families have been classified according to their money incomes, rather than their "total incomes" as defined in 1935-36, since it is the flow of money funds in the Nation's markets which is most important to an understanding of civilian spending, saving and inflation. Data on "total incomes" (money plus income in kind) are also presented on a more inclusive basis than in the 1935-36 studies. The sampling of the present survey is entirely different from the 1935-36 surveys and was designed for the primary purpose of yielding national estimates. It is discussed, for city families, in the appendix which appears in the reprint of the article in the September Monthly Labor Review.

<sup>6</sup> The term "family" or "consumer" is used to include both families of two or more persons and single consumers (persons who did not pool their incomes or expenditures with anyone else). About six-sevenths of the Nation's consumers were composed of families of two or more persons and about one-seventh of single consumers. Single consumers were predominant at lower income levels and families at higher levels, though some of each were found at all income levels.



# PROPORTION OF NATIONAL AGGREGATE CONSUMER INCOME AND EXPENDITURE RECEIVED AND SPENT BY SELECTED INCOME GROUPS



Source: BASED ON PRELIMINARY ESTIMATES PREPARED BY THE BUREAU OF LABOR STATISTICS AND THE BUREAU OF HOUSE ECONOMICS IN COOPERATION.

UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

Because, with rising incomes, there were fewer families whose incomes were below the \$2,000 level in 1941 and 1942, this group of families received proportionately less of aggregate national income than in 1935-36. Families whose incomes were above the \$3,000 level, on the other hand, were more numerous and as a group they received and spent a greater part of the national total. The fact that there were fewer low-income families in 1941 and 1942 means that many who in earlier years were in those brackets have now moved up into higher-income brackets. The consequent decreased share of national income received by the low-income group has sometimes been wrongly interpreted as proof that such families have not benefited from the general increase in income, or that this decreased share is inconsistent with the sharp rise that has occurred in wage and salary income. It should be clear, however, that insofar as low-income families have shared in the rise in income there are bound to be fewer of them.

*Implications for fiscal policy.*—These changes in income have important implications for fiscal policy and for the entire question of price control. The heart of the inflation problem is the pressure of an increasing volume of expenditures on a constant or decreasing supply of consumer goods. In the first quarter of 1942, however, over two-fifths of the purchasing power of American families was in the hands of families with incomes above \$3,000, with little more than one-tenth in the hands of those with present incomes below \$1,000. To the extent that incomes continue to rise, the bulk of the purchasing power will become concentrated in what were considered middle and high money income groups in the pre-war period.<sup>5</sup>

### *Farm and Nonfarm Income*

Both farm and nonfarm families<sup>6</sup> have shared in these general increases in income. Thus from 1935-36 to 1941, 18 percent of all nonfarm families shifted from the class with income under \$1,000 to the higher income classes; the corresponding percentage for farm families was 22 (table 2). The median money income for nonfarm families rose from \$1,214 to \$1,875, for farm families from \$494 to \$860. One-seventh of all farm families had incomes above \$2,000 in 1941 as compared with only one-twentieth in 1935-36. The somewhat greater movement of farm families than of nonfarm families from the lowest money-income levels to higher levels in this period is explained, at least in part, by the differing sources of income of the two groups. The incomes of farm families even at the lowest levels are largely dependent upon the nature of the market for agricultural products. Increased demand and higher prices for their products have shifted a relatively larger number of farm families to higher income levels. In nonfarm areas, however, at the lowest income levels there is a much larger number of persons who are dependent upon pensions and other

<sup>5</sup> It should not be assumed that the distribution of all families by total money income will correspond in any but a rough sense to the distribution of income tax returns by net taxable money income. Aside from the fact that the money income of a family will usually be higher than its net taxable income, the income-receiving units are quite different. A "family" is here defined as a group of persons sharing income and expenditure. The income tax return covers the combined incomes of husband and wife only when they file a joint return but never includes separate incomes received by other members of the family. Such members file separate returns if their income is above the exemption limit, and many will not file if the income is below it. Separate returns and community property returns of husband and wife also contribute to the differences in concept.

<sup>6</sup> In this paragraph "families" is used to mean only families of 2 or more persons, since comparable data for 1935-36 are available only for this group.

forms of fixed income, whose incomes are unaffected by general increases in employment and earnings, and not at all by higher prices, since they have no products to sell.

TABLE 2.—*Percentage Distribution of Farm and Nonfarm<sup>1</sup> Families,<sup>2</sup> by Money Income, 1935-36, 1941, and 1942<sup>3</sup>*

[Preliminary national estimates<sup>4</sup>]

Net money income class	1935-36		1941		1942 <sup>3</sup>	
	Nonfarm	Farm	Nonfarm	Farm <sup>4</sup>	Nonfarm	Farm <sup>4</sup>
0 to \$500.....	14	51	8	32	9	34
\$500 to \$1,000.....	26	28	14	25	13	16
\$1,000 to \$1,500.....	23	11	16	15	14	10
\$1,500 to \$2,000.....	15	5	16	11	16	8
\$2,000 to \$3,000.....	13	3	27	9	24	7
\$3,000 to \$5,000.....	6	1	13	6	16	7
\$5,000 and over.....	3	1	6	6	8	7
Total.....	100	100	100	100	100	100

<sup>1</sup> Includes city families and rural nonfarm families.

<sup>2</sup> Includes families of two or more persons and single consumers.

<sup>3</sup> Annual rate for 1942 based on first quarter.

<sup>4</sup> Prepared by the Bureau of Labor Statistics and the Bureau of Home Economics in cooperation.

<sup>5</sup> The percentage of families having net losses may be derived by subtracting the sum of the distribution shown from 100.

Notwithstanding the recent increases in farm incomes, farm families in 1941 were concentrated at the lower-cash-income levels to a greater extent than were nonfarm families. It does not follow, however, that differences in the kind and quantity of goods and services available to the two groups are as marked. Income in kind (such as the value of home-grown food, housing of home owners, free fuel and other goods received without direct money payment) is of considerably greater importance in farm than in nonfarm areas. Thus, at every income level the average value of income in kind was much greater than for nonfarm families (table 3). If the money value of such goods is added to actual money income, the total income of the median farm family<sup>7</sup> is increased by 70 percent, that of the median nonfarm family<sup>7</sup> by less than 10 percent. Hence, if the value of money plus income in kind is taken as the measure, differences in well-being between farm and nonfarm families are considerably less marked than a comparison of money incomes alone would indicate.

TABLE 3.—*Average Yearly Income in Kind of Farm and Nonfarm<sup>1</sup> Families<sup>2</sup> by Money-Income Class, 1941*

[Preliminary national estimates<sup>3</sup>]

Net money-income class	Nonfarm	Farm
0 to \$500.....	\$163	\$417
\$500 to \$1,000.....	172	529
\$1,000 to \$1,500.....	150	557
\$1,500 to \$2,000.....	162	602
\$2,000 to \$3,000.....	176	603
\$3,000 to \$5,000.....	213	719
\$5,000 and over.....	358	
Median family <sup>4</sup> .....	157	530

<sup>1</sup> Includes city families and rural nonfarm families.

<sup>2</sup> Includes families of 2 or more persons and single consumers.

<sup>3</sup> Prepared by the Bureau of Labor Statistics and the Bureau of Home Economics in cooperation.

<sup>4</sup> These averages represent the income in kind of the families with the incomes below which half the non-farm and farm families and single consumers in the Nation fall, respectively.

<sup>5</sup> See footnote 4, p. 701.



### *Living-Cost Changes*

The changes in income must be viewed against a background of rising living costs. Both the Bureau of Labor Statistics' index of the cost of living to city workers and the Bureau of Agricultural Economics index of the prices of goods farmers buy for family living rose 7 percent from 1935-36 to the year 1941. The cost-of-living index for city workers rose another 8 percent from the average of 1941 to the average of the first 3 months of 1942, and the cost-of-living index for farmers rose 13 percent over the same period. In consequence the increases in money income discussed in the preceding sections have resulted in smaller increases in real income. The changes in expenditures and savings discussed in the following sections must also be viewed against this background of rising living costs, although higher living costs in themselves do not explain the changes that occurred. Thus the average family with an income increase of 4 percent from 1941 to the first quarter of 1942 spent less than 2 percent more for family living—not enough to keep up with rising living costs. This meant that consumers were buying fewer or were using cheaper goods in the first quarter of 1942 than in 1941. At the same time 65 percent of the rise in money income of the typical (median) family with income around \$1,500 between 1941 and the first quarter of 1942 went to enlarge its savings, which increased 47 percent over 1941.

### *Use of Increased Income*

The year 1941 was a period in which the production of war goods and the production of consumer goods were expanding simultaneously. More consumer goods were being turned out than at any other time in history. Increasing incomes in that year resulted in sharply increased purchases of many types of goods. This was true not only in the aggregate for the Nation but at each income level above \$1,500. By the first 3 months of 1942, however, the first effects of the curtailment in the production of consumer goods on consumer spending had already become apparent. The attack on Pearl Harbor had intensified the Nation's fighting mood. Conversion of the automobile industry was under way. Personal taxes were higher, but they still took less than 1 percent of income at the middle income level. Despite higher living costs and taxes, savings increased markedly for all families except for those which had had a recent decline in income. Expenditures for current living were lower (table 4).

TABLE 4.—Average Yearly Expenditure, Savings, and Taxes per Family<sup>1</sup> by Money-Income Class, 1935-36, 1941, and 1942<sup>2</sup>[Preliminary national estimates including both urban and rural consumers<sup>3</sup>]

Net money-income class	Money expenditure for family living			Net saving or deficit			Taxes, gifts and contributions to persons outside economic family		
	1935-36	1941	1942 <sup>2</sup>	1935-36	1941	1942 <sup>2</sup>	1935-36	1941	1942 <sup>2</sup>
0 to \$500.....	\$394	\$370	\$424	-\$115	-\$87	-\$172	\$10	\$17	\$16
\$500 to \$1,000.....	747	738	784	-37	-20	-64	31	29	24
\$1,000 to \$1,500.....	1,154	1,155	1,160	32	55	52	54	48	44
\$1,500 to \$2,000.....	1,542	1,576	1,524	112	116	180	78	71	72
\$2,000 to \$3,000.....	2,038	2,214	2,012	289	166	336	121	112	128
\$3,000 to \$5,000.....	2,778	3,086	2,880	724	489	644	228	190	232
\$5,000 and over.....	5,888	6,758	6,116	4,420	3,724	7,936	1,244	1,228	1,480
Median family <sup>4</sup> .....	914	1,361	1,380	-9	87	128	40	60	60

<sup>1</sup> Includes families of 2 or more persons and single consumers.<sup>2</sup> Annual rate for 1942 based on first quarter.<sup>3</sup> Prepared by the Bureau of Labor Statistics and the Bureau of Home Economics in cooperation.<sup>4</sup> These averages represent the expenditures of the family with the income below which half of the families and single consumers in the Nation fall.

### Definition of Savings

The savings figure as calculated in this survey measures net change in assets and liabilities for each family. It does not measure the total amount of assets on hand in the form of bank deposits, cash, etc. It includes net reductions in outstanding debts, both installment and open-book credit, amounts owing to banks, insurance companies, etc. It also includes payments of life-insurance premiums, payments on principal on mortgages on the family home or other real estate owned by the family, purchases of Government or other bonds or stocks, and other investments. Advance payments on Federal income tax, in excess of amounts due in the first quarter of 1942, were treated as a part of savings for that period. Increases in liabilities, on the other hand, such as net increases in borrowings or amounts owed on installment accounts were subtracted, thus reducing the net savings figure. Likewise, drawing on past savings, such as net reductions in bank accounts or cashing of bonds or other securities, constitutes a deduction from the net savings figure. Each family or single consumer interviewed gave a statement of the increase or decrease over the period in each class of assets and liabilities, and the net reckoning of these items determined how much he was "in the red" or "in the black" for the period.

### Changes in Savings and Expenditures

Savings by families with incomes below \$2,000 rose markedly from 1935-36 to 1941, but fell for families with higher incomes. In 1935-36 many of the low income families had suffered sharp decreases in income and had not cut their scale of living accordingly. In 1941 there were considerably fewer such families in the low income brackets. The lower savings in 1941 by families with incomes over \$2,000 suggests a large amount of anticipatory buying at that time. In the first quarter of 1942, compared with the year 1941, savings for all but the lowest income families rose markedly. Thus savings by families with incomes between \$1,500 and \$2,000 were 50 percent greater, and in the next higher bracket more than doubled.

The expenditures on automobiles (purchase and operation) and on furnishings and equipment may be used to illustrate the differences in the way in which war-time conditions affected the spending of increased incomes as between 1941 and the first quarter of 1942. These two types of purchases account for a large part of all consumer durable goods. At every level of income 1941 expenditures for each of these groups was considerably higher than in 1935-36 (table 5). Thus, families with incomes between \$1,500 and \$2,000 were spending one-fifth more for automobiles and four-fifths more for housefurnishings and equipment. By the first quarter of 1942 despite a continuing increase in income, families had cut their buying of furnishings and automobiles. This was true for all but the lowest income level. For families with incomes above \$1,000 the drop in automobile expenditure was sufficient to carry it below even the 1935-36 rate. Part of this drop is of course explained by the normal seasonal decrease in expenditures for automobile operation in the winter, but most of it was due to the unavailability of new cars and tires and even certain types of parts. The drop in purchase of furniture and equipment, although marked, still left the first quarter expenditures above the 1935-36 rate.

TABLE 5.—Average Yearly Expenditure per Family<sup>1</sup> for Automobiles, Furnishings, Clothing, and Food, by Selected Money-Income Classes, 1935-36, 1941, and 1942

[Preliminary national estimates including both urban and rural consumers <sup>2</sup>]

Net money-income class, and year	Automobile purchase, operation, and maintenance	Household furnishings and equipment	Clothing	Food
<b>\$500 to \$1,000:</b>				
1935-36.....	30	19	84	269
1941.....	58	35	85	271
1942 <sup>3</sup> .....	48	28	76	304
<b>\$1,500 to \$2,000:</b>				
1935-36.....	138	55	173	494
1941.....	165	99	183	514
1942 <sup>3</sup> .....	104	64	168	536
<b>\$3,000 to \$5,000:</b>				
1935-36.....	307	96	365	750
1941.....	364	188	402	906
1942 <sup>3</sup> .....	240	164	380	908

<sup>1</sup> Includes families of 2 or more persons and single consumers.

<sup>2</sup> Prepared by the Bureau of Labor Statistics and the Bureau of Home Economics in cooperation.

<sup>3</sup> Annual rate for 1942 based on first quarter.

The change in expenditures for these two important groups of durable goods between 1935-36 and 1941 is typical of the way in which families spent money for all durable goods of this kind. Such expenditures are dependent not only upon the amount of income in the possession of consumers, but also upon whether income is increasing or decreasing. In times when income is increasing and the future looks bright, a given amount of income will usually give rise to a considerably higher volume of expenditures on durable goods than it will when incomes are decreasing, the future is uncertain, and purchases can be postponed.<sup>8</sup> Since incomes were higher and increasing more rapidly in 1941 than in 1935-36, larger expenditures for durable goods were to be expected.

<sup>8</sup> Other analyses of changes in expenditures and savings with changes in income show the same tendency. (See Factors Governing Changes in Domestic Automobile Demand: The Dynamics of Automobile Demand (New York, 1939), by C. F. Roos and Victor von Szeliski; and Statistical Investigations of Saving, Consumption and Investment, with Bibliographical Footnotes, by Mordecai Ezekiel, in American Economic Review, March and June 1942 (pp. 22-49, 272-307).)



In the first quarter of 1942, of course, the situation was entirely different. Shortages of materials, conversion to war production, and tightening of credit terms reversed the trend of buying which might have been expected to follow rising incomes and there was a marked decline in buying of consumer's durable equipment.

The very high rate of spending for family living in 1941 as compared with 1935-36 and the sharp drop in the first quarter of 1942 suggest the operation of an additional factor in these markets: a considerable amount of anticipatory buying in 1941. It therefore seems likely that many families, especially those with incomes above \$1,500 in 1941, began 1942 with considerable stocks on hand to face the curtailed production of durable and semidurable goods of the war years.

Part of the funds thus released in the first quarter of 1942 by the drop in expenditure for durable goods has been diverted to other types of goods for which prices have been rising. Food expenditures in particular have been affected by rising prices, so that in 1942 they accounted for a larger percent of income at each income level up to \$2,000 than in 1941. The increase in food expenditures, however, was considerably less than the rise in food prices, suggesting that families were buying less food or cheaper food in 1942. Expenditures also were somewhat higher for housing and medical care. The higher medical-care expense in the winter of 1942 reflects a normal seasonal difference. Housing expenditures were higher partly because of greater fuel requirements in winter but also because of increased rents in defense areas and some rise in fuel prices.

The greater part of the funds released by decreases in durable-goods expenditure in the first quarter of 1942, however, has appeared in increased saving.

### *Savings Outlook for Remainder of 1942*

Several factors affecting the level of savings in the latter part of 1942 were not operating in the first quarter of the year, although it is difficult at this time to assess the net effect of these forces. Some of the forces producing the high level from January through March will not affect the situation in later months. Other new factors making for higher savings have already appeared.

The decline in volume of many consumer goods available (if accompanied by price-control programs effective enough to prevent price spirals or "black markets" and rationing programs widespread enough to limit rising expenditures for substitutes) will leave many purchasers with no alternative except to save more. The Department of Commerce index of total sales of consumer goods showed a continuous drop from January to June, notwithstanding higher prices. The trend was reversed in July with a sharp upturn. A second important element contributing toward increased savings is the patriotic appeal for war-bond purchases. The Treasury campaign for voluntary deductions of 10 percent of pay envelopes and pay checks got under way in the second quarter of 1942. If these appeals do not prove adequate to meet the situation, there remains the possibility that steps will be taken toward compulsory pay-roll deductions. Still another factor operating to increase savings, at least for a period, is the new governmental regulations regarding charge accounts. Beginning July 10, 1942, stores may no longer furnish credit to

customers whose accounts for the second month previous are not paid in full. This will mean that those persons who had substantial amounts owing on charge accounts will be paying off balances during the latter part of the year to an extent probably greater than the amount of new charges they can incur. During the period that unpaid balances remain, this factor will operate to increase savings.

By far the largest part of the increase in savings must be attributed to larger savings by individual families, unexplained by any change in their economic circumstances. Thus city families whose incomes were approximately the same in both periods were nevertheless saving at a considerably higher rate in the first quarter of 1942 than in the year 1941. Although any definitive statement on the reasons for this increase in savings must await a detailed analysis of changes in the various components of savings, it appears likely that a net reduction in the volume of outstanding consumer debt was a prominent cause. Thus, virtually all of the increase in savings between 1941 and the first quarter of 1942, as estimated by the Securities and Exchange Commission, is accounted for by changes in the volume of outstanding debt. The Department of Commerce estimates that short-term consumer debt will be reduced by a total of \$3,500,000,000 in 1942 because of credit restrictions and the curtailment of the production of consumer durable goods.

In the first quarter of 1942 this reduction was due primarily to a decrease in new commitments on installment purchases, rather than to an increase in gross repayments of consumer debts. For example, if a family in 1941 paid off \$500 on old debts but incurred an increased obligation of \$800 for a new car and had no other changes in debts or savings, it would have had a \$300 deficit for the year. If in the first quarter of 1942 the same family paid off another \$125 on old debts (an annual rate of \$500) but did not incur new obligations for a car or any other purpose, it would have been saving at a rate of \$500 per year. Thus, if old debts were being repaid at a normal rate and new debts not being incurred to any substantial extent because of the unavailability of many durable consumers goods and the tightening up of installment credit, the volume of outstanding debt would be expected to decline and net consumer savings to increase by the same amount. As outstanding debt is curtailed, new funds will be released for other uses. It is by no means certain that they will necessarily be used for saving.

A second factor in the increase in savings in 1942 is that increases in income are not immediately accompanied by extensive changes in the level of living (see table 6). For example, a family may continue for some time to live in the same house and wear much the same kind of clothing. Increases in income consequently are at first often devoted largely to increased savings.

Although the difference in savings between families having increased and unchanged incomes is not so large as has sometimes been claimed, it is a factor. As soon as families have become accustomed to their new level of income, however, it is entirely possible that their level of savings will tend to be reduced and be more nearly like that of families in their particular income bracket whose income was not changed. Since it is unlikely that the increases in income will continue at the same pace that they have in the past 2 years, the number of families living on incomes to which they have adjusted their expenditures may be expected to increase.

TABLE 6.—Average Yearly Expenditure and Savings for City Families,<sup>1</sup> by Income Change From 1941 to 1942<sup>2</sup>

Money-income class in 1942 <sup>2</sup>	Consumers whose incomes in 1942—					
	De- creased more than 5 percent	Changed less than 5 percent	In- creased more than 5 percent	De- creased more than 5 percent	Changed less than 5 percent	In- creased more than 5 percent
	Expenditure for family living			Savings		
0 to \$1,000.....	\$802	\$618	\$606	-\$337	-\$35	-\$15
\$1,000 to \$1,500.....	1,390	1,214	1,153	-181	34	62
\$1,500 to \$2,000.....	1,760	1,594	1,536	-81	126	157
\$2,000 to \$3,000.....	2,316	2,080	2,094	0	242	290
\$3,000 and over.....	4,176	3,614	3,607	143	1,228	1,059

<sup>1</sup> Includes families of 2 or more persons and single consumers.<sup>2</sup> Annual rate for 1942 based on first quarter.

In addition to uncertainty as to whether the first-quarter level of savings<sup>9</sup> has actually continued since that time it should be noted that while the 1942 level was above that of 1941 for the income group over \$1,500, in general it did not exceed the 1935-36 levels of saving to any significant extent.

### Farm and Nonfarm Saving and Spending

As indicated in an earlier section of this article, farm families in general have smaller cash incomes, and much more income in kind than city families. At each level of money income their expenditures reflect profoundly different ways of life. These differences in expenditure are much more basic than are differences in spending between urban families living in different regions, or even between urban and rural nonfarm families. Such differences are especially important at this time because they mean that the inflationary effects of income in the possession of a farm family may be quite different from the effects of an equal income in that of a nonfarm family.

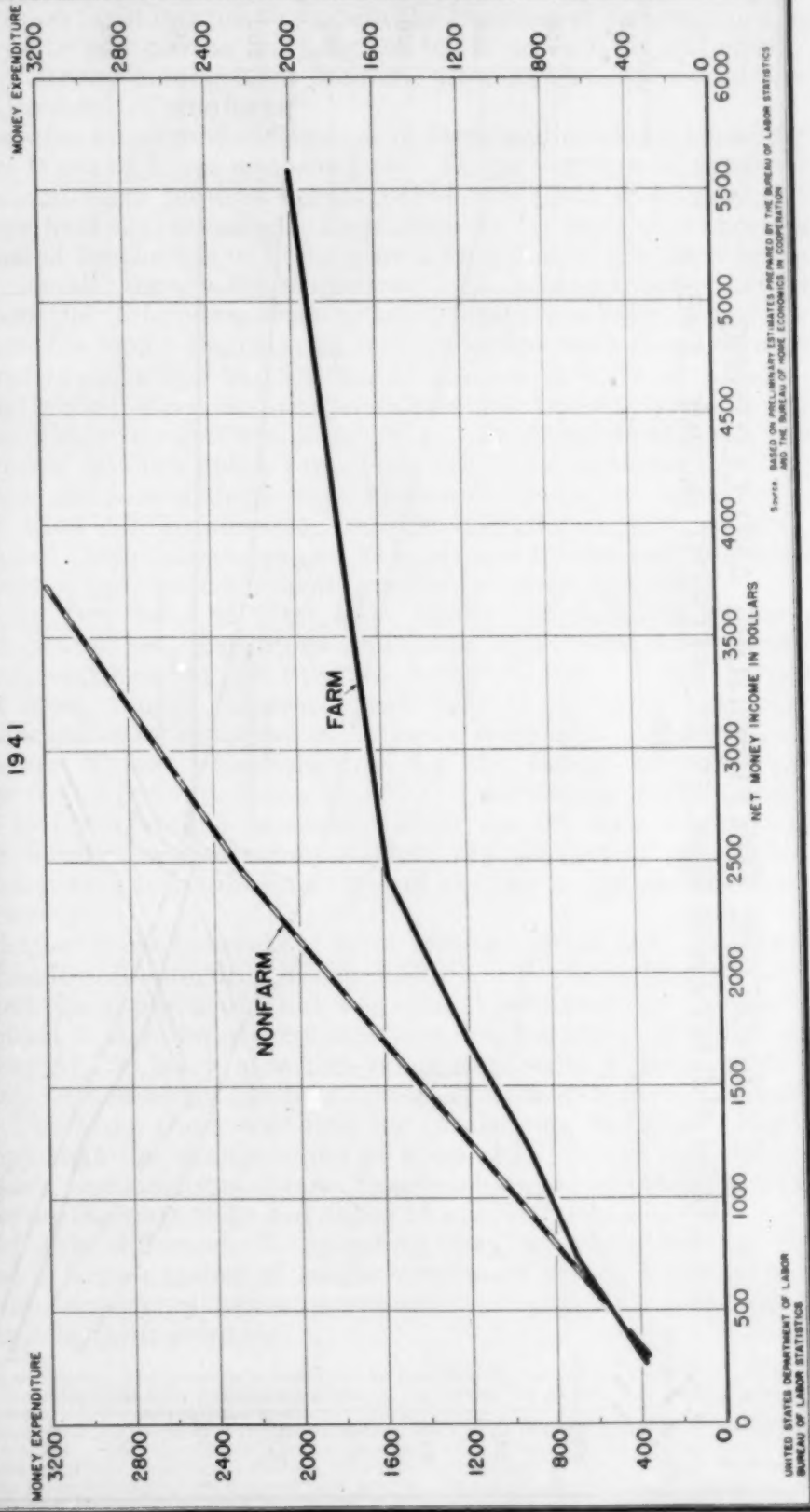
Most pronounced are the differences in the amount of saving and total expenditure at each income level in 1941. Thus, the typical (median) farm family<sup>7</sup> with a money income of only \$750 was saving as much as the typical (median) nonfarm family with an income more than twice that amount (\$1,640). At the income level of \$1,500-\$2,000, nonfarm families were saving an average of \$50 in 1941, farm families over \$500. In general, at the lowest income levels, total expenditures of farm and nonfarm families were equal, but as income increased farm families spent a considerably smaller percent of each dollar of additional income than did nonfarm families. Thus, the actual expenditures of farm families with incomes over \$3,000 were only half those of nonfarm families with the same incomes and their savings were proportionately greater (chart 2).

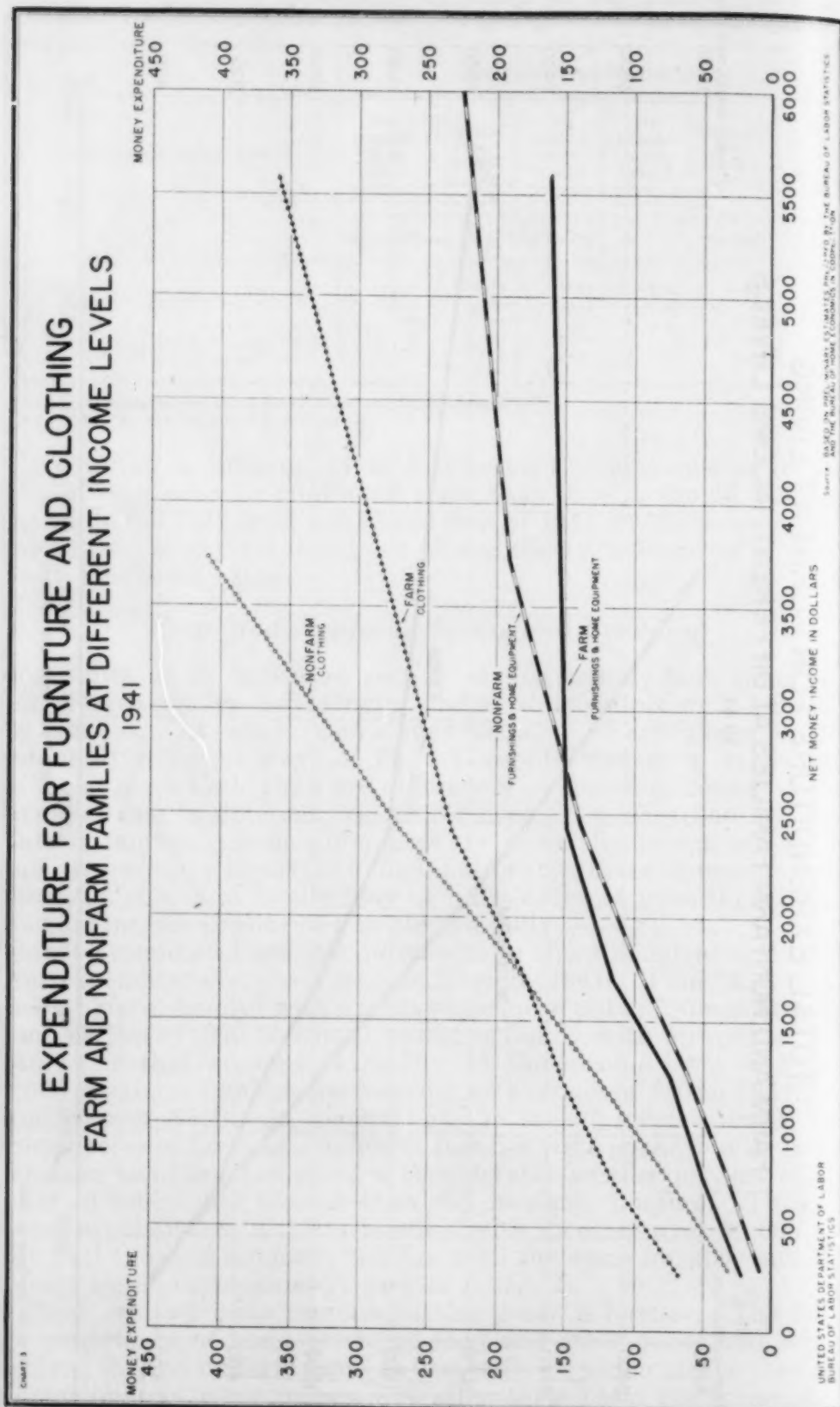
There are two main reasons for this great difference. The first is the importance of home-produced food and other goods and services received in kind by farm families (see table 3), which means they have proportionately more money left after their basic requirements for

<sup>7</sup> See footnote 4, p. 701.<sup>9</sup> Another factor which may lead to a somewhat lower level of savings, a relatively small one, is the treatment of advance payment of Federal income taxes in calculating quarterly savings (see p. 706). This constituent of savings will not be present in all the later quarters of 1942. Unless compensating increases in other forms of saving occur, therefore, the volume of savings may be expected to decline on this account.



# TOTAL EXPENDITURE FOR CURRENT LIVING FARM AND NONFARM FAMILIES AT DIFFERENT INCOME LEVELS





living have been met. Secondly, the fact that the farm family is dependent upon farm income to sustain the business of farming means that the urge to pay off the mortgage or to invest in land and equipment is very strong among farm families, often at the expense of the family's enjoyment of comforts.<sup>10</sup>

There are also important differences in farm and nonfarm spending for different types of goods and services. The two groups of expenditures for which farm families spent considerably less than nonfarm families were food and housing. Requirements for both these groups can be satisfied by the use of home-grown food and of the farm home with only small money expenditures. At money-income levels below \$1,500 the differences were notable, and were even larger for housing than for food. Since most farmers either were home owners or were farm tenants who had the use of a house at little or no additional cash rental, their cash expenditures for housing were much below those of city families which pay rent. Other goods and services for which farm families spent somewhat less than nonfarm families, at practically all income levels, were household operation, transportation other than by automobile, recreation, tobacco, and reading. Virtually all of these differences can be explained by the very different requirements of farm and nonfarm families for these services.

Despite the low level of total farm family expenditures in cash, their expenditures for furnishings and home equipment were above nonfarm expenditures at all incomes below \$3,000. Farm houses are almost never rented furnished, and tend to be larger than city homes. Medical-care expenses of farmers were also greater at all incomes below \$3,000. Expenditures for the family use of a car were higher for all incomes below \$2,000. Automobiles are extremely important to farm families because of their use for farm business as well as for family transportation. (Only the portion of automobile expense chargeable to nonbusiness use of the car is included in these figures, however.)

At the higher-income brackets farm families spent less than nonfarm families for all categories of expenditure. For several categories, this was just the opposite of what was true at low incomes. Thus, as shown in chart 3, farm family expenditures for clothing were higher up to about the \$1,750 level, at which point they were equaled, and at higher levels surpassed by the corresponding expenditures of nonfarm families. The same thing was true for furnishings and home equipment except that the change came at about \$2,750. In general, for each category, expenditures of farm families changed less sharply from one income to the next than did those of nonfarm families.<sup>11</sup>

Much of this difference in spending may be explained by the presence of a large number of single consumers in the lower-income classes in nonfarm areas, as compared with a negligible number at all income levels in farm areas.

<sup>10</sup> The income and savings figures shown in this report for farm families (as well as for nonfarm) are all net family figures, excluding gross farm business transactions. However, if a portion of net family income is invested in the farm, this properly appears as a form of family saving.

<sup>11</sup> It will be noted that the steepness of the curves in chart 3 is greater at every income level for nonfarm than for farm families. This suggests that a greater percent of each increased dollar received by nonfarm families would be spent for furnishings or clothing than if it were received by farm families. This would be true if income alone determined the shape of these curves. To the extent, however, that they are also explained by varying proportions of single consumers, at different income levels the difference in percent of increased income which would be spent by nonfarm families for furnishings and equipment as compared with farm families would be less.

NOTE.—Detailed tables for all families, both farm and nonfarm, are available in mimeographed form, and will also appear in the reprint of this article.



## Wartime Policies

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### REGULATIONS ON WARTIME CONTROL OF MANPOWER

#### *Nonferrous Metals and Lumber Industries*

WARTIME powers of the Government were used recently to stabilize the labor supply in the nonferrous-metals and lumber industries in 12 Western States. Under his authority as Chairman of the War Manpower Commission, Paul V. McNutt announced an "employment-stabilization plan" and designated as "critical labor areas" the States of Arizona, Colorado, Idaho, Montana, Utah, Wyoming, California, Nevada, Oregon, Washington, New Mexico, and Texas.

The new policy provides that a worker leaving a job in the nonferrous-metals or lumber industry for employment in other lines must first obtain "a certificate of separation" from a representative of the United States Employment Service. Similarly, employers are instructed to require such a certificate before hiring a man who has been working in the designated industries in that area.

The plan was worked out in consultation with representatives of labor and employers, and will not affect bargaining agreements. Appeal procedure is provided to safeguard the interests of employers and workers, including those who apply for employment in designated industries and are rejected. The plan was deemed necessary because manpower losses had reduced the production of copper and other nonferrous metals and lumber. It is based upon an "antipirating" policy developed by the National Management-Labor Policy Committee and approved by Chairman McNutt of the War Manpower Commission on July 16, 1942.<sup>1</sup>

#### EMPLOYMENT REQUIREMENTS

Under the stabilization plan all nonferrous-metal mining, milling, smelting, and refining, and all logging and lumbering industries and activities in the area covered, are designated as "essential war production activities." Employees in these industries are declared to be engaged in "critical occupations" and are subject to the rule requiring a certificate of separation in changing employment. Employers may not hire workers except upon presentation of a certificate, and likewise, employers are directed not to dismiss an employee, "except for gross misconduct" and with the approval of a designated representative of the United States Employment Service.

Approval of certificates of separation will be granted only when it can be proved that continued employment of the worker would no longer contribute to the war production program. Representatives

<sup>1</sup> See Monthly Labor Review, September 1942 (p. 460).

of the Employment Service are also directed to intercede in behalf of any worker to whom employment is denied on grounds other than lack of qualification and physical fitness.

#### CONDITIONS FOR SEPARATION

The plan provides that a certificate of separation will be granted to a worker "if the circumstances are such that his separation is in the best interests of the war effort, as well as of the individual concerned," or if a refusal to grant it "would result in hardship and injustice to the individual." The following circumstances are illustrative of what may be considered good grounds for separation: (1) If the worker is competent to perform more highly skilled work; (2) when he is employed for substantial periods at less than full time; (3) when distances between home and work are unreasonably great; (4) if compelling personal reasons exist for a change; and (5) if he is employed at wages or under working conditions substantially below those prevailing in the community for his kind of work.

Enforcement of the provisions of the plan is to be administered by the executive departments of the Government, who are expected to exert pressure on contractors and workers to compel conformance. There is no specific provision for means of enforcement. Any worker or employer, or group of workers or employers, dissatisfied with any act or failure to act pursuant to the plan, may appeal to the area war manpower committee.

#### RULES RELATING TO DRAFT DEFERMENT

For better enforcement of instructions of the War Manpower Commission regarding the workers in the nonferrous and lumber industries, the Selective Service System has ordered that any worker who leaves his job in such industries "be reclassified out of class 2-A or class 2-B into a class immediately available for service." This is the first time that the power of the draft has been used in such a manner and indicates that further action will be taken along similar lines. As a result of this action, workers who have been deferred from active military service because of their essential service in these industries will be immediately subject to the draft if they quit their jobs, unless they first obtain certificates of separation.

#### *General Regulations for Maximum Use of Manpower*

Prior to issuance of the plan involving nonferrous metals and lumber workers, Brigadier-General Frank J. McSherry, Director of Operations for the War Manpower Commission, issued instructions to regional officials relating to the establishment of critical areas and the allowable limits of hiring and job changing.<sup>2</sup> These instructions set forth the conditions which must be observed before an area may be designated as critical and the rules to be followed in controlling hiring of workers and in the shifting of workers in such areas.

<sup>2</sup> War Manpower Commission. Press release 6-0434-BU-CO-ST-WP: Procedure for Development, Approval, and Operation of Cooperative Plans under War Manpower Policy to Prevent Pirating of War Workers. Washington, August 1, 1942.

**PROCEDURE FOR COOPERATIVE PLANS**

The instructions provide that no action may be taken under the war manpower policy except upon the authorization and direction of the regional director of the War Manpower Commission. The regional director is to designate a particular area and authorize and direct the appropriate regional representative of the Commission to initiate and attempt to secure agreement upon a cooperative plan in the designated area as provided in the war manpower policy. As soon thereafter as practicable, the regional director must submit a full report to the Director of Operations for submission to the Chairman of the War Manpower Commission.

**REQUIRED CONTENTS OF REPORT**

The report of the regional director must enumerate the participants in the negotiations; these must include representatives of Government, management, and labor. It must also show the reason why the maximum utilization of manpower in the designated area has been or is likely to be impeded, whether because of the concentration of essential war production, the shortage of workers, an excessive rate of turn-over, or the migration of workers to other areas. The war production activities proposed to be designated as "essential war production activities" for the purpose of the plan must be given, and the occupations proposed to be designated as "critical occupations" must be indicated. Finally, the report must indicate whether all affected parties concur in the plan, and if not, the individuals, organizations, or agencies which were in disagreement.

**REQUIRED PROVISIONS IN PLAN**

In order to win the approval of the Commission, an area plan must embody the following: (1) A clear definition of the area; (2) a provision that there will be no solicitation of war workers except through public employment offices; (3) provisions for the participation of an industrial area management-labor committee; (4) principles governing movement of workers between plants; and (5) agreement of employers, labor organizations, and Government agencies concurring in the plan, to adhere to its provisions.

**PROHIBITED PROVISIONS**

An approvable cooperative plan may not contain any of the following provisions: (1) Permitting the blacklisting of individuals; (2) violating any Federal law, stabilization agreement, or National War Labor Board determination; (3) violating a bona fide collective bargaining agreement; or (4) prohibiting the reemployment of a worker who has been employed after the effective date of the plan under less favorable working conditions than those prevailing in the community for such work.

**MOVEMENT OF WORKERS**

The following principles regarding the movement of workers are to be included in all approved plans: (1) A worker in a nonessential activity may be hired for war work without restriction; (2) a worker in an essential war production activity may not be hired by an employer for work other than essential war production; (3) employ-



ment by Federal departments and agencies may be made only with the approval of the United States Civil Service Commission; (4) a worker engaged in an essential activity must have a written release from his employer before he may accept other employment in essential war production; and (5) a worker engaged in an essential war production activity may be employed by another employer if the circumstances are such as to indicate that the change of employment is in the best interests of the war effort as well as of the individual concerned.

#### NOTICE MAKING PLAN AND POLICY OPERATIVE

Upon submission by the Director of Operations of the report and copy of the cooperative plan to the Chairman of the War Manpower Commission, the Chairman, if he approves the same, shall give and publish a notice specifying the area which constitutes the critical labor area, the occupations which constitute critical occupations, and the activities which constitute essential war production activities. Upon publication of such notice the plan and policy shall become immediately operative.

#### PROCEDURE FOR REVIEW

Cases of nonadherence or of disputed interpretation may be raised by the employer threatened with the loss of a worker, by the employer proposing to hire a worker, by the worker, by any affected labor union or other labor organization, or by an affected Government department or agency.

Such cases are referred to the area War Manpower Commission representative, or if there be no such representative to the manager of the local employment office, except in cases involving Federal Government employment which shall be referred to the district manager of the Civil Service Commission designated for the purpose. The decision in the case is subject to review by the industrial area management-labor committee, which makes recommendations to the area War Manpower Commission representative. Appeals from the recommendations may, in certain instances, be made to the regional director, to the regional committee, to the National Management-Labor Policy Committee, and finally to the Chairman of the War Manpower Commission.



#### PROHIBITION OF DOUBLE PAY FOR SUNDAY AND HOLIDAY WORK

THE President on September 9, 1942, issued an Executive order, effective October 1, 1942, which prohibits the payment of double time for necessary overtime work on Saturdays, Sundays, or holidays on any work relating to the prosecution of the war. In order to expedite production of war materials, the provision for such extra payments has been generally abrogated by agreements between employers and unions, but there have been complaints that some labor organizations refused to conform to the new practice.

Although prohibiting the payment of premium rates on Sundays, Saturdays, and holidays as such, the President's order permits in

<sup>1</sup> War Manpower Commission. Press release 6-0214: Procedure for Review of Recommendations of Industrial Area and Regional Management-Labor War Manpower Committees. Washington, 1942.

lieu of pay for Sunday work (which has sometimes interfered with continuous operation) payment of double time for the seventh consecutive day of work for any individual, thus encouraging in the interest of efficiency one day of rest in seven. The order also permits the payment of time and a half for all overtime work, as provided in the Fair Labor Standards Act and in some union agreements.

The text of the Executive order is as follows:

Whereas many labor organizations have already adopted the patriotic policy of waiving double-time wage compensation or other premium pay for work on Saturday, Sunday and holidays, as such, for the duration of the war; and

Whereas it is desirable and necessary in the prosecution of the war, and to insure uniformity and fair treatment for those labor organizations, employers, and employees who are conforming to such wage policies that this principle be universally adopted;

Now, therefore, by virtue of the authority vested in me by the Constitution and the statutes, as President of the United States and as Commander in Chief of the Army and Navy, it is hereby ordered:

I. That the following principles and regulations shall apply for the duration of the war to the payment of premium and overtime wage compensation on all work relating to the prosecution of the war:

A. No premium wage or extra compensation shall be paid to any employee in the United States, its territories or possessions, for work on Saturday or Sunday except where such work is performed by the employee on the sixth or seventh day worked in his regularly scheduled workweek and as hereinafter provided.

(1) Where because of emergency conditions an employee is required to work for 7 consecutive days in any regularly scheduled workweek a premium wage of double-time compensation shall be paid for work on the seventh day.

(2) Where required by the provisions of law or employment contracts, not more than time and one-half wage compensation shall be paid for work in excess of 8 hours in any day or 40 hours in any workweek or for work performed on the sixth day worked in any regularly scheduled workweek.

B. No premium wage or extra compensation shall be paid for work on customary holidays except that time and one-half wage compensation shall be paid for work performed on any of the following holidays only:

New Year's Day  
Fourth of July  
Labor Day  
Thanksgiving Day  
Christmas Day

and either Memorial Day or one other such holiday of greater local importance.

II. All Federal departments and agencies shall conform the provisions in all existing and future contracts negotiated, executed, or supervised by them to the policies of this order. All such departments and agencies shall immediately open negotiations to alter provisions in existing contracts to conform them to the requirements of this order.

III. Nothing in this order shall be construed as requiring a modification of the principle that every employee should have at least 1 day of rest in every 7 days. The continuous operation of plants and machines in prosecuting the war does not require that employees should work 7 consecutive days.

IV. Nothing herein shall be construed as superseding or in conflict with the provisions of the statutes prescribing the compensation, hours of work, and other conditions of employment of employees of the United States.

V. All Federal departments and agencies affected by this order shall refer to the Secretary of Labor for determination questions of interpretation and application arising hereunder.

VI. The provisions of this order shall become effective October 1, 1942.

### *Supplemental Order*

On September 17, 1942, the President issued an executive order amending the original order. The amendment provides that in any industry or occupation in which the Secretary of Labor finds that a wage-stabilization agreement approved by a Government department

or agency is operating satisfactorily, the Secretary may determine that any or all of the provisions of this order shall not apply to such industry or occupation or to any classes of employees therein. The Secretary is also authorized to make such a determination, if the Secretary finds that the nature and exigencies of operations make such action necessary or advisable for the successful operation of the war.



## INDUSTRIAL-RELATIONS POLICY OF NAVY DEPARTMENT

THE Navy Department, which is one of the largest employers of labor in the United States, has adopted a definite policy to govern its relations with labor.<sup>1</sup> Formal announcement of the policy was made on August 8, 1942, in a statement sent by the Secretary of the Navy to the commandants of all continental naval districts and navy yards, to all bureaus and offices of the Navy Department, to the headquarters of the United States Marine Corps and Coast Guard, and to other industrial shore establishments of the Navy.

The Secretary pointed out that the only way to win the war is by elimination of friction and controversy and by the devotion of all the energies of the Nation against the enemy. All representatives of Navy management are directed to meet representatives of labor on a basis of open-mindedness, tolerance, and good will. It is expected that the carrying out of this policy will enhance the morale of the labor force at the various naval establishments. "This program does not mean higher wages, shorter hours of work, or less discipline, but it means closer cooperation, more understanding of each other's problems, more friendliness in our relationships, and undoubtedly greater sacrifice on the part of all of us."

Under the new procedure, the Secretary of the Navy and the Commander in Chief of the United States Fleet will hold meetings with representatives of labor from each of the navy yards and other naval shore establishments for discussions of methods of cooperation. The first of these meetings was held on October 1, and future meetings are to be held every 4 months. To each meeting approximately 250 representatives are to be invited.

### *Presentation of Grievances*

A statement, issued on July 15, 1942, by Rear Admiral Moreell, Chief of the Bureau of Docks and Yards, contained a more concrete explanation of what Navy management should do to improve relations with employees, and gave definite recognition to the status of labor unions in presenting grievances. This statement was sent to supervisors of the Bureau of Docks and Yards and to officers of the building-trades departments of the American Federation of Labor. It read as follows:

From time to time complaints reach the Bureau to the effect that Bureau representatives in the field show scant consideration of cases presented to them by representatives of labor organizations.

<sup>1</sup>For general labor policy to govern Government-owned munition plants, adopted jointly by the War and Navy Departments, see *Monthly Labor Review*, July 1942 (p. 715).



The Chief of the Bureau realizes that in many instances excessive amounts of time are required to straighten out labor difficulties. However, it is believed that much can be accomplished toward establishing cordial labor relations if the accredited representatives of labor are convinced that any legitimate proposal which they make will receive careful consideration and will not be subject to peremptory rejection.

It is desired to establish a policy of giving consideration to all legitimate proposals and protests of accredited representatives of labor. If such proposals are not accepted, an effort should be made to explain to the labor representatives why the Navy representatives are unable to accept. The administration policy with respect to the recognition of the legitimate place of labor organizations is well known and has been enacted into law. The spirit of this policy should be carried through all of our dealings with the representatives of labor.



## ALLOCATION OF CANADIAN MANPOWER <sup>1</sup>

GROWING labor scarcity in Canada has made it necessary to remove additional workers from civilian industries and to concentrate a growing proportion of the workers in war production. According to a statement by the Prime Minister on August 19, 1942, the original reason for curtailing production for civilian needs was to conserve scarce materials; now the reason is to conserve manpower for the production of direct war supplies. The plan to be followed in making the best possible use of the services of all men and women was outlined, the object being to have every able-bodied person undertake some form of essential service in the armed forces, in war production, or in vital civilian activity. In allocating labor, it was stated, care must be taken that (1) the services of all persons not needed to maintain the health and efficiency of the people should be employed directly for war purposes and (2) the services of the persons who are thus "mobilized" should be employed in the most useful manner.

### *Administration*

Responsibility for administering the wartime manpower policy is to remain with the Director of National Selective Service, who is responsible to the Minister of Labor. Local administration is facilitated by the existence of the employment offices of the Unemployment Insurance Commission, the machinery of which is being expanded rapidly.

No change is to be made in the method of enlisting men for the army, navy, and air force, which will continue to be carried on directly by the three defense agencies. For the present, conscription of men for military service in Canada will remain the responsibility of the Department of National War Services. However, it is planned in the near future to transfer to the Director of National Selective Service the task of calling up men for military service. In preparation for the transfer, plans for close coordination are being worked out between the Department of National War Services and the National Selective Service Administration. By this means it is hoped to avoid undue dislocation of war industry resulting from the calling of men to the colors.

<sup>1</sup> Data are from Manpower and a Total War Effort, by W. L. Mackenzie King (address on August 19, 1942, published by Director of Public Information, Ottawa, Canada); Canada Gazette (Ottawa), Extra No. 94, August 28, 1942; Canadian Labor Gazette (Ottawa), July 1942; Reserve of Labor among Canadian Women, Canadian Department of Trade and Commerce, Dominion Bureau of Statistics (Ottawa), 1942; and the daily press.

To right inevitable errors and to prevent needless hardship the National War Services Board will be retained to hear appeals from decisions of selective service officers.

### *Labor Requirements and Supply*

In mid-July the Director of National Selective Service estimated that 250,000 additional workers would be needed, in the succeeding 5 months, to fill the requirements of the armed services and the continually expanding war industry. Sources of supply included some 60,000 partially employable men listed as unemployed; women; and a considerable number of men already employed in nonessential industries. A registration made 6 weeks earlier, and kept up to date weekly, showed approximately 80,000 unemployed males between the ages of 16 and 69, inclusive. Included in this number were thousands of unemployables; and others who were partially employable on very light and simple work. It was estimated that roughly one-fourth were completely unemployable. Much of the labor needed was expected to come from among women in the ensuing months—"women doing jobs which industrialists thought could only be done by men."

With approximately 5,000,000 persons (of a population totaling 11,500,000) in the armed services or in civil occupations, the supply of men available for work is rapidly approaching depletion. Gainfully occupied females numbered 665,859 in 1931, and 958,000 in August 1940. Females registered under the Unemployment Insurance Act totaled 655,096 on March 31, 1942. Allowing for persons in non-insurable occupations, the gainfully occupied female population is estimated as 1,200,000. Women who are not gainfully employed are looked to as the main source for additional labor. The 1941 census showed that there were 5,594,062 females, and therefore a total of about 3,300,000 aged 10 years and over, from which workers could be drawn. Unmarried women are the first to be absorbed in the rapidly expanding war production. Up-to-date statistics are not available on the marital status of women at present, but in 1931 there were 3,240,663 females 10 years of age and over who were not gainfully employed (83 percent of the female population). Of this total, 1,141,528 were single, 1,868,639 married, and 230,220 widowed or divorced. Married women are the largest potential source of labor. Only 3.92 percent of the married women 15 to 44 years of age were gainfully occupied in 1931.

The Director of National Selective Service stated that greater attention must be given to "making the most efficient use of our manpower after we have assigned it to its proper place in the production scheme." He cited the waste caused by workers moving from job to job, and by inexcusable absence, stating that where workers are frequently absent the employer must keep a surplus of labor on hand at all times to take up the slack. Such labor might better be employed steadily at full-time production. "Absenteeism in too many plants averages from 15 to 25 percent," and, he added, the time has come to look upon the solution of the problem as a major source of additional labor.

### *Control Measures*

The compulsory principle is not new in Canada, as conscription has been a part of the law since 1940. Compulsion will be resorted to in the case of those who otherwise would not be willing to serve, but voluntary methods will also continue to be used.

Continual shifts of manpower in wartime make record keeping a heavy and important task. Special surveys and registrations are carried out by the Department of Labor and will continue to be made as required. For example, women aged 20 to 24 were registered during several days beginning on September 14. Registration was compulsory for women between the specified ages who were unemployed; for those who were employed but did not hold unemployment-insurance registration cards; and for domestic servants, self-employed workers, nurses, teachers, and institutional employees.

It is intended to expand the facilities for child care to permit mothers to take jobs. Day nurseries are being established in cooperation with the authorities of two large industrial Provinces. Other welfare services are being developed to protect the health of workers and their families. Training for entrants into industry is being expanded.

### *National Selective Service Regulations, 1942*

Regulations known as the National Selective Service Regulations of 1942, issued on recommendation of the Minister of Labor, came into operation on September 1, 1942. At the same time several previously adopted orders in council dealing with control of employment were revoked; among them were the order preventing employment of male agricultural workers in nonfarm pursuits (P. C. 2251)<sup>2</sup> and one requiring employers to hire employees through the employment exchanges (P. C. 5038)<sup>3</sup>. Both subjects are handled in the new order. The reason cited for revoking the existing measures was that this would lead to better understanding of the new controls, the latter being described as essential for the effective use of labor in the war effort.

### *Labor Priorities*

In consultation with specified agencies, the Director of National Selective Service may classify occupations, industries, firms, or establishments, either nationally or in any community, according to the degree of their essentiality for the defense of Canada, for the efficient prosecution of the war, and for civilian needs. Amendments are permissible from time to time. Four classes of labor priority are recognized: "very high"; "high"; "low"; and no labor priority. The priority schedule is not to be published, but may be circulated to Government officials and employees whose duties relate to national selective service.

### *Agriculture*

Unless a permit is obtained from a national selective service officer, persons wholly or mainly employed in agriculture are forbidden to enter other employment except (1) active service in the Canadian

<sup>2</sup> See Monthly Labor Review, May 1942 (p. 1087).

<sup>3</sup> See Monthly Labor Review, August 1942 (p. 228).



armed forces by voluntary enlistment; (2) compulsory military training or service if it is established by the authorities that the person is not an essential agricultural worker; or (3) temporary employment for not over 30 consecutive days outside agriculture, at a time that does not interfere with agricultural employment. No employer may hire any agricultural worker unless such person has obtained and presents the permit to the employer.

### Changes in Employment

Written notice of 7 calendar days—exclusive of the day or shift on which notice is served—must be given by an employer who wishes to dismiss an employee, and by an employee to an employer if he wishes to quit his job. Exception to the rule is permitted only if the national selective service officer approves a shorter period of notice; if the lay-off or termination is occasioned by damage to or destruction of the place of employment by fire, explosion, or other catastrophe; or if the employee is called for military training or service.

An employer may suspend an employee from duty without notice if the employee has been guilty of serious misconduct, but must furnish the employee and the nearest employment office with a notice of separation. A request for review of the suspension may be filed in writing with the national selective service officer within 7 days (exclusive of the day or shift of the suspension). After investigation the officer is required to notify both employer and employee, and then either the employment is terminated or the worker is reinstated. If the worker is reinstated, he is entitled to full pay from the date of his application for a review to the date of reinstatement. If the employee does not apply for a review of the suspension order, his employment is deemed to have terminated on the suspension date.

Where any law requires a period of notice in excess of 7 days, the provisions of the regulations do not supersede the preexisting requirements.

Every employer is obliged to furnish to the nearest local office a copy of each notice of separation given or received by him, within 48 hours, and must retain a copy in his own files.

Neither an employer nor his agent may interview or seek to employ any person or retain any employee, unless the person presents the written permission (in duplicate) of a national selective service officer to seek and accept employment. The written permission is referred to as a "permit to seek employment." Any employer engaging an employee must immediately record the required information on both copies of the permit; within 48 hours of engaging the employee he must send one copy to the nearest local employment office and file the other. Employers of agricultural workers who are hired for not over 30 consecutive days, at times that do not conflict with agricultural production, are exempt from the requirement of having "permits to seek employment."

All notices and forms that employers are required to sign under the selective-service system must, to be valid, have the signature of an officer above the rank of foreman. Prescribed forms will be furnished by the Director of National Selective Service to employers, and to employees by their employers, on request. Inability to obtain a prescribed form does not relieve employers and employees of their obligation to give the notice required under the terms of the regulations.

A national selective service officer must furnish a permit to seek employment to any person who presents a notice of separation. Permission may be limited to seeking employment in a given community, industry, or establishment.

Whenever an employer learns that he will need the services of additional employees or must lay employees off, he must immediately give notice of the facts to the nearest employment office.

In reemploying workers the requirements as to interviewing employees and filing permits do not apply provided the employee is rehired (1) within not more than 14 consecutive days following the last employment with the same employer; (2) immediately following the end of a period of sickness or disability if either was the cause of termination; (3) on resumption of work following a stoppage caused by an industrial dispute; (4) if a collective agreement provides preference in employment and reemployment according to length of service or seniority; or upon such employee's reinstatement pursuant to legislation dealing with reinstatement in civil employment from the armed forces. Employers are required to file notice of reemployment with the nearest local employment office within 48 hours of the time the action is taken.

### *Control of Advertising*

No person may advertise offering employment except as arranged by a national selective service officer, upon application of the prospective employer and at the latter's expense. The officer is empowered to make such arrangements for advertising as he considers necessary and desirable.

### *Compulsory Employment*

Persons who do not voluntarily work may be required to accept employment. A national selective service officer may, by written order, direct any person to report for interview outside his working hours; direct an unemployed person or a person not gainfully occupied for 7 consecutive calendar days to apply for any available suitable work, and to accept any work offered him; and upon not less than 7 days' notice direct any person who has been employed at less than normal full time for a period of more than 2 consecutive calendar weeks to apply for any available full-time suitable work of high or very high labor priority, and to accept any such work. A copy of any order directing a person to accept other work must be sent to the person's employer.

To be suitable, work may not be at lower wages or under less favorable conditions than those observed in the community in which the work is performed, by agreement between employers and employees, or failing such agreement, than those recognized by good employers. In determining the suitability of work, physical fitness, prior training, experience and prior earnings, distance of work from place of residence and family and domestic responsibilities must be considered. No person may be directed to accept work which necessitates a change in residence, unless arrangements are made for financial assistance as described below. No person who has been directed to accept work may quit without written permission from a national selective service officer.

### *Supplementary Allowances*

A national selective service officer may, in his discretion, arrange for paying all or part of the cost of transportation of a worker, dependents, and effects, on a nonrecoverable basis. The allowances may be made for traveling expenses if the worker alone is moved more than 100 miles; traveling and moving expenses if it is deemed necessary to move the worker's family; meal allowances and incidental expenses while traveling (not over \$3 a day); a living allowance (not over \$5 a week) if the worker is moved away from his family and his earnings are insufficient to offset increased living costs due to the separation; an allowance (not over \$5 a week) if the worker is transferred to a job which involves a decrease in his weekly earnings; and a loan (not to exceed \$15) to defray living expenses during the first week of employment. The regulations specify that the \$15 loan is to be repaid in full out of the worker's first full pay for the regular pay period. Expenditures under the foregoing provisions are chargeable to the war appropriation.

### *Appeals and Penalties*

Appeal under the regulations may be directed in writing to the divisional registrar of the administrative division in which the person resides, and the national war services board for that division is required to hear and determine the appeal. Decisions are final and binding. Persons who appear before an appeal board must do so at their own expense. The burden of proving compliance rests upon the person charged with the offense. Complaints must be made within a year from the time when the case arose.

The penalty for contravention of the regulations, or of any order, direction, or ruling issued under them, is imprisonment not to exceed 12 months or a fine of not over \$500, or both.



## WARTIME POLICIES OF CANADIAN TRADES AND LABOR CONGRESS, 1942 <sup>1</sup>

AT ITS fifty-eighth convention, held in Winnipeg during August 1942, the Canadian Trades and Labor Congress considered present and future problems facing the workers of Canada. Greater worker representation was urged in shaping war policy, both by giving labor a place on governmental bodies and by establishing joint industrial councils to deal with production problems. Endorsement was given to a resolution urging the executive of the Congress to do everything possible to achieve labor unity in Canada.

### *Wages and Working Conditions*

Urging a complete overhaul of the Canadian cost-of-living index, worker representatives criticized the national index and expressed a preference for regional indexes to be used in awarding the cost-of-living bonuses which are added to wages periodically as a wartime

<sup>1</sup> Data are from the Trades and Labor Congress of Canada, *Canadian Congress Journal* (Montreal), August 1942; *Winnipeg Free Press*, August 25, 26, 27, 1942; and *Gazette* (Montreal), August 29, 1942.



measure. One delegate explained that living costs had "skyrocketed" in many localities, while rising more slowly in others. For example, it was stated that in Prince Rupert, Fort William, and Halifax—war production centers—the cost of living was much higher than the general average; and that as long as costs in a large number of rural communities are included in the index, the national average will not give a fair picture of the situation in the high-cost areas.

Incident to the discussion of the cost-of-living index, a resolution was passed asking that all workers earning less than 50 cents an hour or \$25 a week be paid at these minimum rates, regardless of the wage ceiling.

Other wage and working conditions resolutions requested provision by the Government of overtime pay at the rate of time and a half; permanent appointments for all full-time postal employees; and a provision that no person be required to remain on any job at a lower wage than the union rate in that district if the opportunity presented itself of obtaining the union rate. A request was made for regulations permitting the release of employees working on a short-time basis in order that they may enter steady employment in vital war industries without loss of seniority and other rights in their former occupation. Creation of a special Dominion department was urged to investigate rates of wages in industries that are displaced. It was recommended that the workers to be taken for war work should be paid rates of wages comparable with those received in their previous employment.

A resolution was unanimously adopted to impress upon the Government the need of amending the instructions under order in council to provide that decisions of the National or Regional War Labor Boards must be rendered within a certain specified time. Some of the delegates criticized the slowness of the boards, but others, who were members of these bodies, defended the delays as unavoidable in view of the policy which they were required to follow.

### *Policy Decisions*

The Congress voted against a resolution to sponsor an organizational drive among the unorganized workers, basing the decision on the ground that the Congress was strictly a legislative body having no jurisdiction over organizational matters.

A proposal for affiliation with the Cooperative Commonwealth Federation—regarded by certain members as the labor party—was also rejected, as the Trades and Labor Congress decided to remain independent of any political organization. A resolution was adopted after various proposals were made stating that the Congress would "continue to act as the legislative mouthpiece for organized labor in Canada independent of any political organizations engaged in the effort to send representatives of the people to Parliament \* \* \*." Although the secretary of the resolutions committee stated that the organization could not affiliate with a political party as a trade-union, appreciation and approval were expressed of the efforts of the Federation on behalf of labor, both organized and unorganized.

Unanimous support was given to a resolution to reopen negotiations with the Labor Union Center of Russia, thereby following the example of the British Trades Union Congress.

## CENTRALIZATION OF GERMAN CONTROL OVER MANPOWER

LOSSES of manpower through the war have caused the Germans to undertake measures for the intensification of recruitment and for the centralization of the Nazi control over the industrial manpower of Germany and of the occupied countries in Europe.

The German Labor Front comprising workers and their employers appears to have outlived its usefulness for the purpose for which it was established by the Nazis—i. e., for waging a war of conquest. This explains in a measure why the authorities have ignored the Labor Front and in March 1942 created an entirely new Government office to deal with manpower.

The principal task of the new office, as officially given, is to organize the exploitation of all available manpower in Germany and in all conquered countries in Europe (including all foreign civilian workers and all war prisoners). It will have control over the procurement and management of manpower for war production and also for the active armies at various fronts. To the office has been transferred authority over all German labor offices (local, provincial, and central), all labor trustees, and all social welfare offices, including those in the conquered countries.

The new office is headed by a General Commissioner for Manpower, appointed by Hitler and working under the authority of Goering, who is next in power to Hitler.

The steps which have culminated in this centralization of the control have been as follows:

A decree was issued on November 7, 1936,<sup>1</sup> by Goering, Commissioner for the Four-Year Plan, for the purpose of assuring an adequate supply of skilled workers for armament production and any other military construction. At the same time a kind of war council was established, leaving out several ministers of Hitler's original cabinet.

This war cabinet had among others, two departments, one of "manpower" and the other of "labor conditions," which were authorized to issue regulations without consulting the Minister of Labor. In January 1942, the manpower department was transferred to the Directorate of the Four-Year Plan, but 2 months later both departments were made subordinate to the new General Commissioner for Manpower.

For the exploitation of manpower—civilians and war prisoners—in the occupied territories in the Soviet Union, the Nazi Government established a Bureau of Labor Distribution having a staff of about 500 clerks, which by the spring of 1942<sup>2</sup> had already created 140 local labor-distribution offices in those territories.

The latest measures of centralization of manpower are directed toward not only war-production purposes but also active service in the German armies. Previously, foreign workers were employed only in production, but now they are also being impressed, as soldiers, into the German fighting forces. Poles, it is reported, have already been forced into the German army on the Russian front.

Before the present war, the control over and direction of industrial production were exercised directly by the State Government through

<sup>1</sup> Reichsarbeitsblatt, 1936, I p. 292.

<sup>2</sup> Deutsche Allgemeine Zeitung, Berlin, March 4, 1942.

the Ministry of Economics, and later through the Directorate of the Four-Year Plan. The Government management of raw materials, foreign trade and exchange, distribution of production contracts and manpower, fixing of prices, limiting profits, etc., required an immense office staff and a certain amount of red tape and delay was unavoidable.<sup>3</sup> In addition, the big industrial enterprises, organized into monopolistic cartels, were getting the largest and the most profitable armament contracts, while small and middle-sized firms often had to be satisfied with the less profitable subcontracts given them by the big companies.

Shortly after the establishment of the Office of General Commissioner for Manpower, the German Government began to reorganize industries into various related trade associations for the purpose of more efficient war production. These associations were put under the authority of the Directorate of the Four-Year Plan. They operate in accordance with the principle of industrial self-government and are to manage distribution of raw materials, contracts, marketing, prices, profits, etc.; in other words, they are to exercise the function formerly belonging to the State Government and cartels.



## WARTIME FOOD CONTROL IN GREAT BRITAIN

MEASURES taken in Great Britain to obtain an even and adequate flow of food into the channels of distribution during the war and to distribute the foods equitably among all classes include governmental control of supplies and distribution, control of demand through rationing, price control, and in addition, improvement of nutrition through such methods as the milk-distribution scheme and the addition of vitamins to margarine and bread, and an educational campaign among consumers as to the nutritional values of different foods.

An analysis of the problems of production, distribution, and consumption of food in Great Britain, by the International Labor Office,<sup>4</sup> has been made as part of the work being done in fulfillment of a resolution adopted at the 1941 Conference of the International Labor Organization, which declared that "the close of the war must be followed by immediate action, previously planned and arranged \* \* \* for the raising of standards of living throughout the world." The experience with food control by Great Britain during the present war is said to have resulted in an accumulation of knowledge, much greater than that in the war of 1914-18, regarding methods for attaining higher living standards, which may be expected to be of value in carrying out post-war policies.

Control over food distribution, the report of this study states, was not instituted in the last war until 1917, but it was learned from that experience that a food-distribution system based on private enterprise must give way to a system of production and distribution under governmental control in time of war. Accordingly, from the beginning of this war food controls have been an accepted part of the British Government's wartime administration.

<sup>3</sup> This tendency in German war production has been clearly brought out in an article entitled "Bureaucratization as a Sign of the Times," published in the *Deutsche Volkswirt* (German Economist), Berlin, September 15, 1940 (p. 1827).

<sup>4</sup> Food control in Great Britain, by Edith T. Denhardt. Montreal, International Labor Office, 1942. Studies and Reports Series B (Economic Conditions) No. 35.)



The welfare of the workers in wartime is largely dependent upon the quantity and kind of food available to them. Although no large-scale investigations have been made of the effects of the war on the consumption of food by different groups of workers, such studies as have been made do not show any measurable decrease in physical well-being caused by food shortages. The amount of food consumed by most workers is dependent largely on their money incomes, but subsidization and price control by the Government can increase the value of these incomes in terms of food. However, the power of the Government is limited to seeing that food is available at reasonable prices, and it cannot be certain that everyone will be able to buy or will buy enough to obtain a nutritionally adequate diet.

### *The Problem of Food Control*

The provision of adequate supplies of food in the United Kingdom is in the hands of the Ministers of Food and Agriculture, controlling, respectively, food imports and distribution, and the production of food. A Food (Defense Plans) Department inside the Board of Trade was established in 1936, and shortly after the outbreak of war a separate Ministry of Food was created with this department as a nucleus. The reserves of essential foods accumulated in 1938 and 1939 under the provisions of the Essential Commodities Reserves Act of 1938 were transferred to the Ministry of Food.

There is a considerable degree of decentralization in the administration of food control, large areas being under the control of divisional food officers, and area commodity officers being in charge of each major food. The boundaries of the commodity areas do not coincide with the divisional food areas, so there have been some administrative difficulties in coordinating the work of these two classes of officers. Retail distribution, the local administration of the rationing schemes, licensing of retailers, and general supervision of the interests of local consumers are in the hands of local food-control committees representing women, labor, and various retail trades. Each committee is headed by a food executive officer who works with the divisional food officers rather than directly with the Ministry of Food, in order to minimize administrative delays. An Inspector General supervises the work of all branches of the Ministry. Numerous advisory committees represent different groups—labor, nutrition experts, and consumers. A scientific food committee, appointed in an advisory capacity in 1940, has paid particular attention to the working out of a minimum diet required for maintaining health and energy under war conditions.

The Acquisition of Food (Excessive Quantities) Order made just before the outbreak of war, which made it an offense for consumers to acquire more than 1 week's supply of food, was the first food-control order to be issued, and remained the only restriction on consumer demand until the introduction of rationing on January 8, 1940. Although during 1940 one product after another came under some form of control, and licensing of traders, fixing maximum prices, and controls over farm products were extended (in the main to "essential" foods), it was not until the beginning of 1941 that comprehensive control over all classes of foods was really started. The "free and cheap milk" scheme was introduced in July 1940. In January 1941 prices of about 30 foods or classes of foods previously uncontrolled

were restricted to the levels prevailing on December 2, 1940. Subsequently, most of these foods and a few more were made subject to prescribed maximum prices. Communal feeding has developed rapidly since the close of 1940. An almost universal system of licensing food traders at all stages of distribution was instituted by orders issued in August 1941 and during the latter part of the year, and in 1942 some of the less-essential foods, such as preserves, dried fruits, cereals, canned goods, etc., have been rationed. There has been a far-reaching reorganization of the transport system in the present year, and additional steps have been taken to suppress illegal trading. Although it is said that much still remains to be done to improve food distribution, the foundations are laid and the outlines are clear.

### *Agricultural Policy*

The wartime administration of British agriculture is largely decentralized, although under the Defense (General) Regulations, 1939, the Minister of Agriculture is given wide powers of control to regulate the cultivation, management, and use of agricultural land and to take over land held by tenants if it is not properly cultivated. Much of this power was delegated to county war agricultural executive committees by the Minister of Agriculture on September 1, 1939. They act as the agents of the Minister in the local administration of agricultural policy and are responsible for the execution of his orders, being allowed considerable discretion in applying them to local conditions. These committees work through a large number of district committees working on a voluntary basis, and the county and district committees are assisted by staffs of experts representing various interests.

In some respects the agricultural system was in a less favorable position to supply the food needs of the nation at the outbreak of the present war than it was in 1914. However, the earlier experience had shown the vulnerability of Britain's food supplies in a modern war, and as a consequence Government plans were more developed and controls were adopted more quickly in 1939 than in 1914. Offsetting this advantage, the submarine has been a menace from the beginning of this war, although the assistance of the United States fleet came more quickly than it did in the first world war period.

The amount of land under cultivation had been declining in Great Britain since 1890, as imported foods became cheaper and British workers found industrial employment more profitable than farm work. The proportion of the occupied population engaged in agriculture had steadily declined, in spite of the fact that the average wage rate of agricultural laborers almost doubled from 1914 to 1938, rising from 18s. per week to 34s. 7d. Late in 1941 a national minimum wage of £3 per week was established for male agricultural labor in England and Wales. As a result of the heavier labor costs farmers have been forced to employ more mechanized equipment on their farms and to reduce production of those crops which require much labor in proportion to the value of the crop. The progressive cheapening of imports prior to the war, and the changing demand as a consequence of the higher level of income resulting from increasing industrialization, had forced the British farmer to increase his production of milk, eggs, vegetables, and fruits, at the expense of cereals, root crops, and cheaper meats. As a result of the changing trends in agriculture, the area

under permanent grass had increased almost 35 percent since 1871-75, whereas arable acreage had decreased by 40 percent in England and Wales and 17 percent in Scotland.

In order to increase domestic production of food it was obviously necessary to plow up grassland. Even before the outbreak of war in 1939, the Minister of Agriculture had called for an increase in the land under plow. By May 15, 1940, over 2 million acres of grassland in the United Kingdom had been plowed, and in November 1941 the Minister of Agriculture stated that the total area under crops, as a result of the new plowing up, was 45 percent above the peacetime figure. In 1942 it was planned to bring the area under plow to 50 percent above the peacetime figure; this was believed to be the limit of the acreage which could be added. In the spring of 1942 about 16 million acres were under cultivation.

As the labor shortage hampers British agriculture, measures have been taken to prevent the drain of workers from the land, to restrict the calling up of agricultural workers for military service, and to obtain new workers. Former agricultural workers have been encouraged to return to farm work, conscientious objectors and war prisoners have been used, and a Women's Land Army has been created; school children have also helped in the harvests.

Various factors make it difficult to plan agricultural production, since it must be integrated with the entire national war economy. Among the results achieved under the agricultural program may be noted the maintenance of milk production at an unexpectedly high level; a slight increase in the numbers of dairy cattle; a 50-percent increase in 1941 of the output of cereals, straw, and potatoes, over the peacetime average; and some increase in the output of root crops and of certain vegetables.

### *Control of Supplies and Distribution and of Rationing*

Food control, in order to be successful, involves control over supplies at their source and over the channels of distribution. Immediately after the outbreak of war and before serious shortages had occurred or prices had risen, the British Ministry of Food set about obtaining control over the supplies of basic foods, since it was realized that the maintenance of stocks and the prevention of price dislocations were dependent upon immediate control measures. Control at first was imposed principally on imported foods, stocks of dried fruits, cereals, butter and other fats, bacon, and ham. All important foods had been subjected to some measure of control by the end of the first year of war, with the exception of eggs, fish, and fresh and canned fruits and vegetables, and by the end of the second year control had been established over most of these products, although no satisfactory scheme has been devised for controlling supplies of fresh fruits and vegetables, poultry, and fish.

As far as possible, the Ministry of Food has operated through the organized channels of food distribution. Men have been appointed to act as controllers for the commodities in which they had formerly dealt, although final decisions of policy rest with civil servants and the Minister of Food. When the Government requisitions stocks of food it does not take the food away from the traders but simply assumes control over the disposition of the stocks, and wherever possible the



Government depends on the members of each trade to solve the vast number of administrative problems that arise. In cases where industries have been made up of many small dealers, the Ministry has encouraged and sometimes required a larger organization for the purpose of appointing representatives to deal with the Ministry. There are five trade members on each of the local Food Control Committees, and trade representatives sit on all the commodity advisory committees.

Control of supplies may be attained either through direct purchase by the Ministry of Food or through the licensing of buyers, while control of distribution may be obtained by licensing traders, by employing traders as agents, or by creating a new trading organization. The experience of Great Britain has demonstrated the importance of licensing, at a very early stage, all traders dealing in controlled foods, as in this way speculation is easier to control and the enforcement of other regulations is simplified.

Control of demand is closely linked with the regulation of the distribution of food. Such control can be secured for particular foods only by requiring some form of authorization for their purchase. Rationing is desirable, it is stated, "not only because it reduces the effects of unequal income distribution and unequal shopping opportunities but also because it can be used to reserve a fair share of nutritionally important foods for all consumers, thus encouraging each to buy his share." In the administration of rationing by the Ministry of Food, four general types have been used for the civilian population: The ordinary ration of a fixed amount in a fixed period for each person; rationing of a fixed amount in any proportions in a group of foods, i. e., jam, syrups, treacle, and in the butter-margarine ration, which fixes the maximum amount of butter; rationing of a group of foods on a "points" basis, which gives the consumer freedom of choice within the ration limits; and by registering for certain foods of which a minimum quantity is distributed to each registered person.

The food policy of the country has been operated to increase the supply of labor by freeing large numbers of women from the necessity of cooking a midday meal. The provision of school meals, factory canteens, and communal feeding centers has resulted in a more economical use of food, fuel, and labor, has generally improved the midday meal for thousands of workers, children, and others, and has freed many women for industrial work. Communal feeding centers and factory canteens are still being extended. This has been one of the most notable war measures adopted in Great Britain, as the meals provided in such centers are in addition to the ration. Not only do these centers provide good and cheap meals, but their operation results in a more economic utilization of food supplies.

### Price Control

Control of prices, and especially of the prices of those goods which largely affect the cost of living, is a central part of the financial policy of the country. As a means of stabilizing the prices of foods, which form 60 percent of the official cost-of-living index, various foods have been subsidized. "At the present time subsidized foods account for approximately 75 percent of the food-price index, and subsidies are being paid at the rate of some £102,000,000 a year, excluding the pre-

war cost of the cattle and sugar-beet subsidies, which have been continued."

The annual subsidy for flour, bread, oatmeal and feeding stuffs amounts to £50,000,000; for meat to £23,000,000; for milk, tea, eggs, and potatoes to £12,000,000; and for the National Milk Scheme to £17,000,000. In addition a subsidy of £20,000,000 annually is paid by the Ministry of Food toward the cost of transport of different foods. The recent increase in wages of agricultural workers, the difficulties of ocean transport, and the continued rise of other costs will necessitate an increase in the amount of the subsidy if retail prices of foods are to be kept down.

Prices of different foods have varied widely in their fluctuations during the war. Methods of controlling prices of food include prescribing fixed or maximum prices, or issuing a current-prices order which limits prices to those of some base period for the same or similar goods sold under similar conditions. Current-prices orders were issued for most commodities before specified maximum prices were set, but they were in most cases followed by maximum-price orders. The prices and margins of controlled foods are established by the Ministry of Food upon the recommendation of its Margins Committee. The Trades-Union Congress Advisory Committee is usually consulted when any major increase in prices is contemplated. In general, the prices adopted by the Ministry are maximum prices and aim at a level covering costs of production plus a reasonable profit for producers and distributors.

Violations of food orders are offenses against the Defense Regulations and, until December 1941, were subject to a maximum penalty of £100 or imprisonment not exceeding 3 months, or both, in a court of summary jurisdiction, and in a higher court to a term not exceeding 2 years, or a fine of £500, or both. The regulations were stiffened in December 1941, but as the penalties did not act as a deterrent to certain large-scale dealers in the "black market," in March 1942 very heavy fines and longer prison terms were provided for such operators; in addition the Ministry of Labor has power to remove trading licenses of violators of food orders. The licensing system was greatly tightened and extended in its scope in August 1941, and since that time a considerable number of licenses have been revoked. This policy, it was said, undoubtedly acts as a deterrent to dealers from violating the laws.

### *Post-War Implications*

The food and agricultural policy which has been developed in Great Britain as a result of the war may be expected to affect post-war conditions. The experience with food control in the last war was said by a British authority to have had little, if any, value for the years of peace. However, "the same thing cannot be said of food control today. Among the tangled and sometimes knotted threads of food-control schemes and orders are some of a different color from the rest, standing out in sharp relief. These threads will not be cut off with the end of the war; for they represent a social policy desirable both in peace and in war."

From the confusion of ideas and argument about the nature of the world to be built up after the horror of war has passed, two conceptions appear to be emerging that have captured the imagination and aroused the determination of almost all

classes of men. One has been happily expressed as "freedom from want." Underlying this conception is the idea that the community through a democratically elected government should take direct and active responsibility for the welfare of all its members. The other conception is not easy to define—indeed it is as yet only imperfectly and loosely expressed—but it is concerned with the belief that a government democratically elected should and can consciously organize the economic resources of the community in the interests of the whole community. Both these principles were widely supported before the war and both have been given an impetus by the war. The very organization of a democratic country for modern total war makes it necessary that these principles should be adopted and applied, and in this process much that is of value for peacetime emerges.



# Employment and Labor Conditions

## INDUSTRIAL SOURCES OF SHIPBUILDING ACCESSIONS IN THE PACIFIC NORTHWEST

THE shipbuilding industry of the Pacific Northwest is recruiting its current labor supply from a large number of other industries.<sup>1</sup> Very few of the workers hired by shipyards in this area consist of workers who have been unemployed recently. One-sixth of these shipbuilding recruits are coming from other shipyards. One-twelfth of them are recruited from the lumber industries. One-tenth come from wholesale and retail trade. Apart from lumber and shipbuilding itself, the newly-hired shipbuilding workers come from a widely scattered list of industries.

### *Bureau of Labor Statistics Survey*

The Bureau of Labor Statistics was requested by the Labor Production Division of the War Production Board to make a special study of shipbuilding accessions. For this purpose two representative yards were selected in each of the four leading Pacific Coast port areas: Seattle, Portland, San Francisco, and Los Angeles. Accession records were taken for a single week during the month of June 1942. From the personnel files of the shipyards surveyed, data were transcribed regarding the last previous employment of workers hired during the week by all departments of the shipyards. A fuller analysis of the data is in preparation, covering location of last employment, occupation, wage rate, and industry of last employment.

The following table presents the results obtained from four shipyards in the Seattle and Portland areas. During the period surveyed these shipyards hired a total of 2,453 workers. Forty-two percent of these workers were drawn from other manufacturing industries, including other shipyards. Forty-six percent were drawn from nonmanufacturing industries and 12 percent had not been employed previously in any industrial occupation or else had been employed in some unknown occupation.

The largest proportion of recruits from any one industry came from other shipyards (17.0 percent). Some of these shipyard workers were transferred by arrangement between the various yards and others doubtless transferred on their own initiative because of varying demands for particular skills in the various individual shipyards. Nevertheless, a real problem of labor turn-over between the various shipyards is suggested by the results of the survey.

The comparatively large proportion of workers drawn from wholesale and retail trade (10.8) is explainable, in part, by the fact that the

<sup>1</sup> For an earlier study of accessions in Atlantic Coast shipyards, see Monthly Labor Review, May 1941 (p. 1142): "Characteristics of Recently Hired Shipbuilding Labor."

survey included accessions from all departments of the shipyards surveyed. However, it is clear that a considerable number of workers previously employed in trade were transferred to mechanical occupations in the shipyards.

Apart from the industries mentioned above, the most important sources of new shipbuilding labor were the lumber industries (7.9 percent), public utilities (6.9 percent) and government (5.7 percent, excluding education). None of these latter sources accounted for as much as one-twelfth of the total accessions. Persons who had been self-employed constituted slightly more than 4 percent of the accessions and farm workers formed an additional 1½ percent. The fact that nearly 4 percent of the accessions consisted of students is explainable, in part, by the fact that the period of the survey occurred at the beginning of the usual school vacations.

In view of the high concentration of aircraft production on the Pacific Coast, the very small proportion of former aircraft workers among those entering shipyards (1.1 percent) is particularly notable.

*Industry of Previous Employment of 2,453 Workers Hired by Shipyards in Portland-Vancouver and Seattle Areas in a Week of June 1942*

Industry	Number of workers	Percent of total accessions	Industry	Number of workers	Percent of total accessions
Total accessions.....	2,453	100.0	Manufacturing—Continued.		
Manufacturing.....	1,030	42.0	Paper and printing—Continued.	23	0.9
Iron and steel.....	117	4.7	Printing and publishing.....	17	.7
Blast furnaces, steel works, etc.....	55	2.2	Miscellaneous manufacturing.....	1,122	45.7
Other iron and steel.....	62	2.5	Nonmanufacturing.....	1,171	6.9
Machinery, except transportation.....	59	2.4	Public utilities.....	38	1.5
Foundries and machine shops.....	34	1.4	Electric light and power.....	49	2.0
Other machinery.....	25	1.0	Railroads.....	29	1.2
Transportation equipment.....	444	18.2	Trucking.....	55	2.2
Aircraft.....	27	1.1	Other.....	261	10.8
Shipbuilding.....	414	17.0	Trade (wholesale and retail).....	43	1.8
Other transportation equipment.....	3	.1	Automotive.....	61	2.5
Nonferrous metals.....	22	.9	Department stores.....	57	2.3
Aluminum manufactures.....	17	.7	Food.....	100	4.2
Other nonferrous.....	5	.2	Other trade.....	35	1.4
Lumber and allied products.....	190	7.9	Hotels, clubs, camps.....	11	.4
Furniture.....	24	1.0	Laundries, dyeing and cleaning.....	19	.8
Logging, sawmills, etc.....	166	6.9	Restaurants.....	11	.4
Stone, clay and glass.....	8	.3	Longshoring.....	35	1.4
Textiles and apparel.....	20	.8	Farming.....	104	4.2
Leather, including shoes.....	1	( <sup>1</sup> )	Self-employed, except farm.....	140	5.7
Food and related products.....	64	2.6	Government, except education.....	98	4.0
Canning and preserving.....	12	.5	Federal.....	19	.8
Meat packing.....	11	.4	State.....	23	.9
Other food products.....	41	1.7	County and municipal.....	64	2.6
Tobacco.....	1	( <sup>1</sup> )	Education.....	93	3.8
Chemicals, petroleum and coal.....	29	1.2	Private construction.....	178	7.3
Rubber products.....	2	.1	Miscellaneous nonmanufacturing.....	301	12.3
Paper and printing.....	56	2.2	Nonindustrial and unknown.....	90	3.7
Pulp, paper and paper products.....	33	1.3	Students.....	2	( <sup>1</sup> )
			Unemployed.....	209	8.6
			Data not available.....		

<sup>1</sup> Less than a half of 1 percent.

CONSTRUCTION EMPLOYMENT IN THE UNITED STATES, 1939-42 <sup>1</sup>*Summary*

THE expenditure of 11.2 billion dollars for new construction in 1942 will provide average monthly employment for approximately 1,950,000 persons, of whom 50 percent will be employed on Federally financed war projects, 39 percent on private projects, and the remaining 11 percent on public nonwar projects.

The Bureau of Labor Statistics estimates that peak employment for 1942 was reached in August, with 2,328,000 persons actively engaged in construction work. Nearly 65 percent of these were employed on construction financed from public funds, of whom 83 percent worked on war projects. From the high point in August it is estimated that average employment for the third quarter of 1942 will drop to 2,290,000 persons, with 1,250,000 employed on war projects, 240,000 on public nonwar projects, and 800,000 on private projects. Further declines during the last quarter of 1942 will reduce employment on war projects to 1,125,000 persons, on public nonwar projects to 120,000 persons, and on private projects to 450,000 persons.

Employment on war projects more than doubled from February to August of 1942, reflecting an increase of over 100,000 persons each month. Peak employment on war projects of approximately 1,275,000 persons is estimated for August 1942.

The highest annual employment level for construction, since the late twenties, was reached in 1941—approximately 2,300,000 persons. The 1941 high point was reached in August, with an average of 2,630,000 persons employed, which was nearly 600,000 higher than the peak month of 1940 and 750,000 higher than that of 1939.

The changing composition of the construction industry since 1940 is reflected in the relationships between employment estimates for public and private projects. In 1939, private projects provided employment for 967,000 persons as contrasted with 623,000 employees on public projects. The inauguration of the war construction program in the latter half of 1940 resulted in an annual average of 90,000 employees on war projects. However, this was offset by decreases in other public projects, shown in table 1, so that employment on all public construction declined to a monthly average of 608,000 in 1940, whereas private employment rose to 1,130,000. By 1941, public-projects employment had increased to 992,000 persons, compared with 1,305,000 persons working on private construction. For 1942, it is estimated that private projects will provide average monthly employment for only 759,000 persons, while employment on public construction projects will increase to 1,190,000 persons.

<sup>1</sup> Prepared in the Division of Construction and Public Employment, by Eve G. Hurlbut.



TABLE 1.—Estimated Employment for New Construction in the United States, 1939-42

Type of work	Average monthly employment (in thousands of persons) <sup>1</sup>			
	1939	1940	1941	1942
New construction.....	1,590	1,738	2,297	1,949
Private projects.....	967	1,130	1,305	759
Residential building.....	578	649	746	424
Nonresidential building.....	252	315	372	181
Private utilities.....	137	166	187	154
Public nonwar projects.....	623	518	385	215
Residential building.....	22	44	31	4
Nonresidential building.....	228	118	68	24
Roads and streets.....	190	207	165	99
Other nonbuilding.....	183	149	121	88
War projects <sup>2</sup> .....		90	607	975
Residential building.....		2	54	71
Industrial building.....		7	206	354
Military and naval building.....		67	253	385
All other building.....		( <sup>3</sup> )	2	10
Roads and streets.....		( <sup>3</sup> )	21	45
Military and naval nonbuilding.....		14	71	110

<sup>1</sup> Employment as presented covers wage earners, salaried employees, and special trades contractors actively engaged in construction work.

<sup>2</sup> Federally financed war construction.

<sup>3</sup> Fewer than 1,000 persons.

### *Trend of Construction Employment, January 1939 to July 1942*

#### WAR PROJECTS

The national defense construction program inaugurated by the Federal Government in July 1940 brought many changes. The importance of the time element on war projects resulted in unprecedented monthly increases in employment, as shown in table 2. The Army cantonment program got under way by October 1940, and with most projects scheduled for completion within 4 to 6 months, accounted for approximately 90 percent of the October-December increase of 274,000 persons. This early cantonment program reached its peak by February 1941, at which time the labor force on all war construction numbered 670,000 persons, or one-third of those employed in the industry for that month. The completion of this early cantonment program resulted in a decline in monthly employment of 178,000 persons from the February peak to June 1941.

The number of persons employed in war industrial building increased from 68,000 in January 1941 to 289,000 in October of the same year. By August 1942, the growing demand for war production facilities increased the employment on this type of construction to 400,000 persons, or nearly one-third of the total employed on war projects for that month.

Construction of war housing was negligible in 1940, providing annual average employment for fewer than 2,000 persons. By August 1941 employment for this type of building had reached 70,000 workers. Subsequent declines occurred in the fourth quarter of 1941 and first quarter of 1942. Late in the winter of 1941-42 additional funds were made available by the Lanham Act and other Federal legislation resulting in an upswing of employment to 76,500 persons by August 1942.

Military and naval building was providing employment for 349,000 persons by December 1940 and reached a peak of 483,000 persons in February 1941. By June 1941 the number employed on these projects had declined to 148,000. Increased activity during the last quarter of 1941 provided employment for 219,000 persons. With our Nation's active participation in the war in December 1941, demands for additional troop facilities resulted in an increase of 424,000 workers in this type of construction—from 156,000 in January 1942 to 580,000 in August 1942.

Employment on military and naval construction projects other than buildings reached 112,000 persons by October of 1941 but declined to 49,000 by February 1942. Subsequent rapid expansion of air-force facilities created employment for an additional 102,000 persons by August 1942, bringing the total workers on military and naval non-building projects to 151,000.

Construction of the strategic highway system, as estimated and defined by the Public Roads Administration, reached its peak of 62,000 employees in August 1942. Between the first and second halves of 1941, the average number of highway construction workers more than doubled, growing from less than 20,000 to 43,000.

Employment on war construction projects has differed in two important respects from the usual employment patterns for construction. First, concentration on different types of construction at various periods of this program has created out-of-season peaks and lows in employment, such as occurred in February and June of 1941. In the second place, the predominance of construction projects utilizing machinery extensively has resulted in comparatively low rates of employment per million dollars expended. In 1941, war construction projects gave employment to 2,112 persons for every million dollars expended; for private projects the average was 2,764 workers, and on nonwar public projects, 2,496.

#### PUBLIC NONWAR PROJECTS

The curtailment of the public works construction program after July 1939, and the beginning of the national defense construction program in July 1940, resulted in a decline in employment on public nonwar projects from 623,000 persons in 1939 to an estimated annual level of 215,000 in 1942.

The public nonwar group covers all construction projects financed from State and local government funds and from all Federal funds other than appropriations for the war construction program. Workers on the construction of public buildings, roads and streets, public utilities, and conservation projects represented 96 percent of total employed on such projects in 1939, with Federal housing projects providing the remaining 4 percent. The number of persons employed on public building declined from 250,000 in 1939, to 162,000 in 1940, 99,000 in 1941, and slightly less than 30,000 in 1942. Conservation, reclamation, and public-utilities projects showed a steady decline from 183,000 persons in 1939 to 88,000 in 1942. In 1940 the labor force employed in road and street construction increased by 17,000 over the 1939 level of 190,000, but dropped to 165,000 in 1941, and is estimated at less than 100,000 for 1942.

Public nonwar construction financed wholly from State and local funds accounted for little more than 10 percent of the 623,000 persons

employed in 1939. With PWA building declining rapidly in 1940, employees on State and local construction became relatively more important, increasing to one-third of the total public nonwar employment in 1940, and to one-half of the 1941 total. The curtailment of all nonessential construction in 1942 is expected to result in a decrease of 170,000 workers, with necessary State and local construction projects accounting for only 45 percent of those remaining on the pay rolls.

#### PRIVATE PROJECTS

Workers on construction financed from private funds increased from an annual average of 967,000 in 1939 to 1,305,000 in 1941. Demands for additional private industrial, transportation, communication, and power facilities to supply the United Nations with the implements of war were responsible for nearly two-thirds of the 175,000 employment increase from 1940 to 1941.

By August 1941, private-construction employment had reached the highest level since 1930, providing work for 1,563,000 persons. Subsequent restrictions of private building to conserve critical materials caused an unprecedented decline in employment to 842,000 workers in March 1942. More drastic curtailment is expected to reduce monthly employment on all private projects to 446,000 persons by the fourth quarter of 1942, or 42 percent of the level for the same period of 1941.

Construction of farm buildings resulted in the only annual increase in private-building employment from 1941 to 1942, rising from 13 percent of the total in 1941 to 24 percent in 1942.

TABLE 2.—Estimated Monthly Employment on New Construction in the United States, January 1939–July 1942<sup>1</sup>

[In thousands of employees]

Year and month	Total construction employment	Private construction			Nonwar public construction			War construction <sup>2</sup>		
		Total	Building	Non-building	Total	Building	Non-building	Total	Building	Non-building
1939: Average.....	1,500	967	830	137	623	250	373			
January.....	1,243	725	625	100	518	222	296			
February.....	1,238	707	616	91	531	233	298			
March.....	1,297	776	676	100	521	239	283			
April.....	1,512	910	791	119	602	277	325			
May.....	1,697	1,024	889	135	673	293	380			
June.....	1,838	1,088	940	148	750	305	445			
July.....	1,896	1,144	988	156	752	300	452			
August.....	1,854	1,165	1,001	164	689	264	425			
September.....	1,814	1,144	979	165	670	242	428			
October.....	1,702	1,060	895	165	642	224	418			
November.....	1,577	974	816	158	603	208	395			
December.....	1,417	892	747	145	525	188	337			
1940: Average.....	1,738	1,130	964	166	518	162	356	90	76	14
January.....	1,205	708	606	132	407	159	248			
February.....	1,167	806	676	130	361	138	223			
March.....	1,254	855	715	140	399	143	256			
April.....	1,481	981	826	155	500	168	332			
May.....	1,718	1,135	968	167	583	182	401			
June.....	1,868	1,245	1,069	176	623	187	436			
July.....	1,985	1,333	1,150	183	640	184	456	12	10	2
August.....	2,049	1,386	1,198	188	618	174	444	45	31	14
September.....	2,059	1,380	1,190	190	604	169	435	75	51	24
October.....	2,056	1,307	1,118	189	575	163	412	174	138	36
November.....	2,038	1,210	1,028	182	507	152	355	321	282	39
December.....	1,980	1,133	965	168	399	126	273	448	399	49

See footnotes at end of table.



TABLE 2.—*Estimated Monthly Employment on New Construction in the United States, January 1939–July 1942*<sup>1</sup>—Continued  
[In thousands of employees]

Year and month	Total construction employment	Private construction			Nonwar public construction			War construction <sup>2</sup>		
		Total	Building	Non-building	Total	Building	Non-building	Total	Building	Non-building
1941: Average.....	2,297	1,305	1,118	187	385	99	286	607	515	92
January.....	1,941	1,067	927	140	332	107	225	542	490	52
February.....	2,011	1,033	906	127	308	100	208	670	617	53
March.....	2,003	1,056	924	132	312	92	220	635	583	52
April.....	2,130	1,213	1,056	157	374	103	271	543	498	45
May.....	2,246	1,318	1,140	178	418	109	309	510	446	64
June.....	2,358	1,423	1,228	195	443	111	332	492	421	71
July.....	2,545	1,524	1,316	208	448	100	339	573	464	109
August.....	2,630	1,563	1,342	221	450	104	346	617	494	123
September.....	2,614	1,518	1,289	229	438	99	339	658	531	127
October.....	2,572	1,428	1,198	230	421	96	325	723	568	155
November.....	2,411	1,342	1,119	223	373	83	290	696	559	137
December.....	2,110	1,182	974	208	302	69	233	626	508	118
1942:										
January.....	1,775	992	816	176	228	46	182	555	472	83
February.....	1,676	876	725	151	217	42	175	583	525	58
March.....	1,759	842	696	146	230	42	188	687	618	69
April.....	1,932	858	699	159	258	45	213	816	702	114
May.....	2,114	894	718	176	279	47	232	914	805	136
June.....	2,264	904	723	181	283	47	236	1,077	905	172
July.....	2,310	873	694	179	246	38	208	1,191	1,001	190
August <sup>3</sup> .....	2,328	815	643	172	238	33	205	1,275	1,062	213

<sup>1</sup> Employment as presented covers wage earners, salaried employees, and special trades contractors actively engaged in construction work.

<sup>2</sup> Federally financed war construction.

<sup>3</sup> Preliminary.

## MEASURES TO RELIEVE UNEMPLOYMENT IN VENEZUELA, 1942<sup>1</sup>

BECAUSE of the current emergency situation in Venezuela, involving severe unemployment, decree No. 138 of June 13, 1942, was issued by the Executive Authority to restrict certain constitutional guarantees, affecting relations of labor and industry, contained in the Constitution of 1936.

By virtue of this decree, the Federal Executive, through resolutions of the Ministry of Labor and Communications, can decree labor conditions in specific enterprises, plants, or branches, for part or all of an industry, or in part or all of the Republic. Among the powers authorized are the following:

1. Increase or shorten the established working day;
2. Permit work on holidays, when such is in establishments not expressly exempted by legislation, with or without compensatory rest;
3. Fix hours of work;
4. Fix minimum compulsory wage scales;
5. Establish special conditions for the acceptance and contracting of laborers;
6. Determine the proportion of nationals and aliens in specific enterprise and plants; and
7. In general, take such other measures as are judged conducive to the ends sought in this decree.

Fines are prescribed for violation of the resolutions issued in accordance with the authorization in this decree. It is stated that the decree does not limit prior decrees restricting constitutional liberties.

<sup>1</sup> Data are from reports of Frank P. Corrigan, United States Ambassador at Caracas.

In an explanatory radio address, the Minister of Labor emphasized the President's power to suspend or restrict constitutional guaranties of civil rights in time of national emergency. He stated, however, that in the present case the labor law and its regulations, the decree establishing profit sharing, and other social legislation remain the basis governing labor relations.

An increase in unemployment in the baking industry because of scarcity of flour prompted the issuance, on June 18, 1942, of a resolution enforcing reduction of the normal workweek to 40 hours, thus making possible the rehiring of persons laid off from employment in the industry. A similar resolution, issued July 3, 1942, fixed a maximum 40-hour week for certain bus drivers in and near Caracas, in order to relieve the unemployment caused by shortage of tires.

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# Social Security

## RAILROAD RETIREMENT BENEFITS, 1941-42

THE first fiscal year of operation of the railroad retirement system under a full wartime economy was completed June 30, 1942. Developments during the year strengthened the financial foundation of the retirement system, according to the annual summary of operations by the Railroad Retirement Board published in its periodical the Monthly Review in July 1942. These developments included improved business conditions with consequent larger tax collections, and a reduction in the number of retirements because of better employment opportunities, thus reducing immediate demands on the fund and ultimately reducing total payments, since retirement at a later age shortens the period for which these individuals will draw annuities.

Benefit payments during the fiscal year amounted to \$126,656,780, of which \$100,970,853 was paid for employee annuities, \$20,538,463 for pensions, \$1,180,373 for survivor annuities, \$393,051 for death-benefit annuities, and \$3,574,038 for lump-sum death benefits. This was an increase of 7.1 percent in annuity payments over the preceding year, a decrease of 11.0 percent in pension payments, and a decrease of 2.6 percent in lump-sum death payments. There was also a decrease in the number of survivor annuities granted during the year, partly as a result of the restriction on the elections of these annuities introduced in the 1937 act; and a 16-percent decline in the number of death-benefit annuities, resulting from the decreasing number of annuities in force under the 1935 act, and an increase in the number of individuals who died without leaving a spouse or dependent entitled to an annuity under the 1935 act.

The following table presents the payments for each type of benefit.

*Total Benefit Payments Certified, by Class of Benefit, by Years 1936-37 to 1941-42 and by Months January to June 1942<sup>1</sup>*

Period	All classes	Employee annuities	Pensions	Survivor annuities	Death-benefit annuities	Lump-sum death benefits
Cumulative through June 1942.....	\$556,782,414	\$406,411,257	\$133,361,694	\$4,352,429	\$2,714,931	\$9,942,102
Fiscal years:						
1936-37.....	4,514,617	4,409,019	34,880,960	36,751	68,846	35,017
1937-38.....	82,654,534	46,759,441	28,886,175	373,813	605,300	1,321,040
1938-39.....	107,131,438	75,429,661	25,969,281	778,234	716,326	2,111,982
1939-40.....	114,025,141	84,536,035	23,086,813	912,570	495,271	2,900,023
1940-41.....	121,799,903	94,306,246	20,538,463	1,070,684	436,134	3,574,038
1941-42.....	126,656,780	100,970,853	20,538,463	1,180,373	393,051	3,574,038
1942:						
January.....	10,487,415	8,407,506	1,694,688	97,610	30,038	257,571
February.....	10,594,583	8,487,633	1,673,062	100,825	32,106	300,955
March.....	10,655,528	8,532,657	1,690,518	99,297	27,471	305,584
April.....	10,563,834	8,518,344	1,679,802	98,670	28,944	238,072
May.....	10,449,134	8,446,066	1,622,061	99,320	25,769	255,916
June.....	10,800,027	8,601,835	1,608,319	103,709	37,655	448,508

<sup>1</sup> Figures for annuities and pensions include amounts payable for a given month on all claims certified to the end of the month and still in force, and retroactive monthly payments on claims initially certified or recertified during the month. Cancellations and repayments of amounts certified in previous months are deducted.



## RISE IN BRITISH PENSION RATES

THE rates for supplementary pensions established by the 1940 amendments to the British Old Age and Widows' Pensions Act were further increased by regulations adopted by Parliament on July 29, 1942.<sup>1</sup> The new rates became effective on the first pension pay day after August 17, 1942. The regulations made in June 1940, for assessing the needs of a pensioner and of any dependents whose needs are to be included in his supplementary pension, contained as one element in the rates a special addition of 1s. 6d. per week for the pensioner and for any dependent of the age of 16 years or over and of 9d. for a dependent under that age. The new regulations increase the amount of the addition for adults by 2s. 6d., or from 1s. 6d. to 4s. and for children by 1s., or from 9d. to 1s. 9d. The amount of the increase in an individual case, therefore, will depend upon whether the pensioner has any dependents and upon their ages.

The estimated additional cost of these pensions, on the basis of the existing number of about 1,125,000 pensioners in receipt of these allowances, will be around £9,250,000 a year.

The new regulations do not affect the discretionary powers which formed an important part of the former regulations, including the power to make winter adjustments, and those powers will therefore be exercised whenever the special circumstances of a case require.

The more important of the former rates and the new rates are given in the accompanying statement.

	Former weekly rate <sup>1</sup>		New weekly rate <sup>2</sup>	
	s.	d.	s.	d.
Pensioner living alone.....	19	6	22	0
Two pensioners (husband and wife) one of whom is the householder.....	32	0	37	0
Pensioner who is a householder but has no wife or husband:				
Male.....	19	6	22	0
Female.....	18	6	21	0
Pensioner living as a member of another household:				
Male.....	<sup>3</sup> 13	6	<sup>3</sup> 16	0
Female.....	<sup>3</sup> 12	6	<sup>3</sup> 15	0

<sup>1</sup> Plus addition for dependents under age 16 of 9d. and over age 16 of 1s. 6d.

<sup>2</sup> Plus addition for dependents under age 16 of 1s. 9d. and over age 16 of 4s.

<sup>3</sup> Plus addition for rent.

## INCREASED BRITISH UNEMPLOYMENT ALLOWANCES

AN INCREASE in unemployment-assistance allowances under the act of 1934, and also in the allowances made under the Unemployment Assistance (Emergency Powers) Act, 1939, for the relief of distress caused by the war, was provided in regulations adopted by the British Parliament July 29, 1942. The regulations came into force on August 17, 1942.<sup>2</sup>

The increased allowances were added to the existing rate, which already included additions to the basic rate made in 1939 and 1940.

<sup>1</sup> Explanatory Memorandum on the Draft Supplementary Pensions (Determination of Need and Assessment of Needs) (Amendment) Regulations, 1942, July 21, 1942. London, Ministry of Health, 1942; Parliamentary Debates, London, July 29, 1942.

<sup>2</sup> Explanatory Memorandum on the Draft Unemployment Assistance (Determination of Need and Assessment of Needs) (Amendment) Regulations, 1942, July 17, 1942. London, Minister of Labor and National Service, 1942; Parliamentary Debates, London, July 29, 1942.

Adjustments respecting rent continue to be related to the basic rates of a householder applicant and his or her dependents and not to the new increased rates, thus insuring that the applicant gets the full benefit of the increases. The increases are in addition to, and not in substitution for, those made under the winter adjustment regulations.

The more important former rates and those now in effect are shown in the following table:

*Increase in Rates of British Unemployment-Assistance Allowances Under 1942 Regulations*

Class of beneficiary	Basic rate	Rate including 1939 and 1940 allowances	New rate
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Husband and wife, one of whom is householder.....	26 0	30 0	35 0
Other householders:			
Male.....	16 0	18 0	20 6
Female.....	15 0	17 0	19 6
Adult member of household:			
Male.....	<sup>1</sup> 10 0	<sup>1</sup> 12 0	<sup>1</sup> 14 6
Female.....	<sup>1</sup> 9 0	<sup>1</sup> 11 0	<sup>1</sup> 13 6
Juvenile 14-16.....	6 0	6 9	7 9
Child 5-8.....	3 6	4 3	5 3

<sup>1</sup> If living in the household of someone else an additional amount toward the rent of the house in which he is living.

The amount of the increases in individual cases depends on the number and age of the dependents. For example, the allowance for a family consisting of man and wife and four children aged 12, 10, 8, and 5, having no resources and paying a rent of 10s. 6d., would be increased from 49s. a week to 58s., and for a man and wife and two children aged 14 and 8 and paying a rent of 9s. the allowance would be increased from 41s. 6d. to 48s. 6d. It is estimated that the additional cost of the increased allowances, based on the existing number of payees, numbering at present less than 40,000, will be in the neighborhood of £400,000 per year. Discretionary powers of the Assistance Board, now exercised wherever the special circumstances of a case require, are not affected by the new regulations.

# Industrial Disputes

## RECENT STRIKES

THE amount of idleness (450,000 man-days) during strikes in August 1942 was approximately the same as in July, although there was a decline from July to August of 12½ percent in the number of new strikes and a decline of 9 percent in the number of workers involved in new strikes. Strike idleness during August is estimated at 0.07 percent of the available working time, the same proportion as in July.

Idleness during strikes affecting war work increased 14 percent in August as compared with July, although the number of workers involved in such strikes declined 6 percent while the number of new strikes was about the same in both months.

There were no strikes in August involving as many as 4,000 workers. The disputes resulting in the most idleness during the month were the strike against Safeway Stores in Alameda County (California), which involved less than 1,000 workers, but continued from August 2 throughout the month, and the 12-day strike involving about 2,400 employees of the Diamond Match Co., Ohio Match Co., and Berst-Forster-Dixfield Co. in Ohio, Minnesota, and Wisconsin.

During the first 8 months of 1942 strike activity was substantially reduced as compared with the corresponding period of 1941. There were approximately three-fourths as many strikes in 1942, but the number of workers involved was only one-third as great and the amount of resulting idleness was only one-fifth as great as in 1941. There were 9 percent more strikes in the first 8 months of 1942 than in the corresponding average period of the 5 pre-defense years 1935-39. However, the number of workers involved was less than two-thirds as great and the amount of idleness during strikes was only 28 percent as great as the January-August average of 1935-39.

*Trend of Strikes, January to August 1942*

Month	All strikes <sup>1</sup>			Strikes affecting war work <sup>2</sup>		
	Number of strikes beginning in month	Number of workers involved	Number of man-days idle	Number of strikes beginning in month	Number of workers involved	Number of man-days idle
<i>1942</i>						
January .....	155	32,500	390,000	27	11,605	46,197
February .....	190	57,000	425,000	50	24,587	118,700
March .....	240	65,000	450,000	66	34,957	166,680
April .....	310	55,000	375,000	91	26,255	173,513
May .....	275	58,000	325,000	125	44,891	137,330
June .....	350	100,000	550,000	171	78,627	254,653
July .....	400	87,500	450,000	198	74,812	233,614
August .....	350	80,000	450,000	195	70,352	266,353

<sup>1</sup> Figures are not final but are subject to change as later information is received.

<sup>2</sup> As determined by a Joint Committee of representatives from the War, Navy, and Labor Departments, Maritime Commission, War Labor Board, and War Production Board. The Bureau of Labor Statistics does not participate in the selection of these strikes, but it does furnish the statistics after the Joint Committee determines which strikes affected war work.



## ACTIVITIES OF THE UNITED STATES CONCILIATION SERVICE, 1941-42

THE United States Conciliation Service during the fiscal year ending June 30, 1942, disposed of 8,511 situations, involving 5,575,971 workers (table 1).

Of these situations 1,622 were strikes and lock-outs involving approximately 639,663 workers; 4,185 were threatened strikes and controversies involving approximately 2,539,950 workers. During the fiscal year 66 disputes were certified to the National Defense Mediation Board, 246 were certified to the National War Labor Board, and jurisdiction was assumed by other agencies in 341 others. The remaining 2,051 situations included investigations, arbitrations, requests for information, consultations, etc.

The facilities of the Service were used in 29 major industrial fields, such as building trades, and the manufacture of foods, iron and steel, textiles, etc. (table 2), and were utilized by employees and employers in 48 States, the District of Columbia, Alaska, Puerto Rico, and Hawaii (table 3).

TABLE 1.—*Situations Disposed of by United States Conciliation Service, July 1, 1941, to June 30, 1942, by Type of Situation*

Type of situation	Number	Workers involved
All situations handled.....	8,511	5,575,971
Disputes.....	5,807	3,179,613
Strikes.....	1,586	633,245
Threatened strikes.....	1,953	1,032,400
Lock-outs.....	36	6,418
Controversies.....	2,232	1,507,550
Other situations.....	2,051	703,997
Investigations.....	625	246,025
Technical services.....	76	26,740
Arbitrations.....	453	167,850
Requests to conduct consent elections.....	20	3,244
Requests for verifications of union membership.....	8	1,022
Requests for information.....	93	150
Consultations.....	466	3,112
Special services of Commissioners.....	199	255,663
Complaints.....	111	191
Disputes referred to other agencies during negotiations.....	653	1,692,361
To National Defense Mediation Board.....	66	167,271
To National War Labor Board.....	246	1,348,930
To National Labor Relations Board.....	283	148,939
To other Federal agencies.....	28	16,281
To nongovernmental agencies.....	17	5,656
To State agencies.....	13	5,284

TABLE 2.—*Situations Disposed of by United States Conciliation Service, July 1, 1941, to June 30, 1942, by Industries*

Industry	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All industries.....	6,467	4,871,914	2,044	704,057	8,511	5,575,971
Agriculture.....	13	3,969	2	233	15	4,202
Automobile.....	120	121,010	22	7,410	142	128,420
Building trades.....	481	431,143	189	43,498	670	474,641
Chemicals.....	221	82,306	50	18,136	271	100,442
Communications.....	48	106,516	11	355	59	106,871
Domestic and personal.....	137	38,411	77	8,324	214	46,735
Electrical equipment.....	248	147,137	49	8,566	297	155,703
Food.....	619	373,184	120	33,256	739	406,440
Furniture and finished lumber.....	228	59,392	77	6,595	305	65,987
Iron and steel.....	961	702,290	234	86,170	1,195	788,460
Leather.....	94	38,460	95	11,951	189	50,411
Lumber.....	223	121,986	54	4,439	277	126,425
Machinery.....	442	282,651	70	8,935	512	291,586
Maritime.....	87	109,386	24	77,292	111	186,678
Mining.....	69	61,118	10	21,551	79	82,669
Motion pictures.....	7	385	3	1,239	10	1,624
Nonferrous metals.....	262	216,996	37	12,126	299	229,122
Paper.....	105	29,837	17	2,465	122	32,302
Petroleum.....	84	41,572	82	13,995	166	55,567
Printing.....	76	7,653	29	2,215	105	9,868
Professional.....	24	36,496	7	445	31	36,941
Rubber.....	78	109,504	25	30,505	103	140,009
Stone, clay, and glass.....	272	95,119	59	8,368	331	103,487
Textile.....	388	336,299	260	50,114	648	386,413
Tobacco.....	33	71,052	19	3,363	52	74,415
Trade.....	246	48,209	64	4,229	310	52,438
Transportation.....	345	150,577	93	21,337	438	171,914
Transportation equipment.....	302	933,274	59	149,812	361	1,083,086
Utilities.....	83	78,877	17	34,042	100	112,919
Unclassified.....	171	37,105	189	33,091	360	70,196

TABLE 3.—*Situations Disposed of by United States Conciliation Service, July 1, 1941, to June 30, 1942, by States*

State	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All States.....	6,467	4,871,914	2,044	704,057	8,511	5,575,971
Alabama.....	183	116,703	43	11,611	226	128,314
Alaska.....	6	799	2	270	8	1,069
Arizona.....	66	14,809	13	5,642	79	20,451
Arkansas.....	43	25,270	18	2,393	61	27,663
California.....	507	469,769	109	24,897	616	494,666
Colorado.....	33	7,212	14	2,282	47	9,494
Connecticut.....	77	91,002	24	2,094	101	93,096
Delaware.....	28	9,293	3	32	31	9,325
District of Columbia.....	68	15,987	64	76,569	132	92,556
Florida.....	200	77,616	65	5,035	265	82,651
Georgia.....	74	15,917	33	4,975	107	20,892
Hawaii.....	8	1,619	1	3,000	9	4,619
Idaho.....	15	8,282	1	200	16	8,482
Illinois.....	410	298,703	134	22,692	544	321,395
Indiana.....	251	127,267	102	17,652	353	144,919
Kansas.....	48	6,301	15	1,439	63	7,740
Iowa.....	80	14,862	32	3,568	112	18,430
Kentucky.....	63	32,769	30	3,170	93	35,939
Louisiana.....	132	71,927	43	11,712	175	83,639
Maine.....	15	9,311	14	426	29	9,737
Maryland.....	79	123,567	29	44,587	108	168,154

TABLE 3.—Situations Disposed of by United States Conciliation Service, July 1 1941, to June 30, 1942, by States—Continued

State	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
Massachusetts.....	139	186, 277	119	28, 246	258	214, 523
Michigan.....	492	753, 047	107	27, 811	599	780, 858
Minnesota.....	75	12, 541	17	2, 440	92	14, 981
Mississippi.....	36	40, 320	16	3, 789	52	44, 109
Missouri.....	188	92, 890	71	18, 263	259	111, 153
Montana.....	27	13, 190	4	176	31	13, 366
Nebraska.....	41	16, 940	4	111	45	17, 051
Nevada.....	13	8, 190	5	723	18	8, 913
New Hampshire.....	8	2, 153	2	3	10	2, 156
New Jersey.....	236	147, 474	52	11, 322	288	158, 796
New Mexico.....	27	12, 913	4	27	31	12, 940
New York.....	506	429, 886	150	158, 317	656	588, 203
North Carolina.....	146	89, 106	96	9, 358	212	98, 464
North Dakota.....			2	31	2	31
Ohio.....	603	524, 245	155	54, 243	758	578, 488
Oklahoma.....	56	25, 781	13	2, 724	69	28, 505
Oregon.....	92	22, 082	20	2, 112	112	24, 194
Pennsylvania.....	550	369, 851	127	54, 286	677	424, 137
Puerto Rico.....	22	61, 574	7	2, 755	29	64, 329
Rhode Island.....	25	32, 666	25	5, 781	50	38, 447
South Carolina.....	48	34, 759	36	12, 299	84	47, 058
South Dakota.....	7	3, 047	4	160	11	3, 207
Tennessee.....	174	57, 890	45	5, 823	219	63, 713
Texas.....	108	53, 206	44	6, 166	152	59, 372
Utah.....	22	20, 950	6	246	28	21, 196
Vermont.....	7	1, 618	7	264	14	1, 882
Virginia.....	97	59, 018	31	1, 109	128	60, 127
Washington.....	115	106, 779	27	46, 271	142	153, 050
West Virginia.....	100	85, 680	17	1, 789	117	87, 469
Wisconsin.....	147	67, 727	35	3, 053	182	70, 780
Wyoming.....	4	1, 129	7	113	11	1, 242

## ACTIVITIES OF THE UNITED STATES CONCILIATION SERVICE, AUGUST 1942

THE United States Conciliation Service during August 1942 disposed of 1,286 situations involving 1,221,398 workers (table 1). The services of this agency were requested by the employers, employees, and other interested parties. Of these situations, 177 were strikes and lock-outs involving 108,670 workers; 687 were threatened strikes and controversies involving 557,227 workers. Altogether, 113 disputes were certified during the month to the National War Labor Board, and jurisdiction was assumed by other agencies in 51 others. The remaining 258 situations included investigations, arbitrations, requests for information, consultations, etc.

The facilities of the Service were used in 27 major industrial fields, such as building trades, and the manufacture of foods, iron and steel, textiles, etc. (table 2), and were utilized by employees and employers in 44 States, the District of Columbia, Virgin Islands, and Puerto Rico (table 3).



TABLE 1.—Situations Disposed of by United States Conciliation Service, August 1942, by Type of Situation

Type of situation	Number	Workers involved
All situations handled.....	1, 286	1, 221, 398
Disputes.....	864	683, 887
Strikes.....	174	108, 590
Threatened strikes.....	206	192, 401
Lock-outs.....	3	80
Controversies.....	481	382, 816
Other situations.....	258	29, 976
Investigations.....	59	10, 224
Technical services.....	8	2, 173
Arbitrations.....	92	11, 876
Requests to conduct consent elections.....	3	102
Requests for information.....	4	4
Consultations.....	70	353
Special services of Commissioners.....	11	5, 230
Complaints.....	11	12
Disputes referred to other agencies during negotiations.....	164	507, 535
To National War Labor Board.....	113	488, 142
To National Labor Relations Board.....	32	5, 376
To other Federal agencies.....	4	1, 114
To Wage Adjustment Board.....	6	5, 301
To nongovernmental agencies.....	7	7, 447
To State agencies.....	2	156

TABLE 2.—Situations Disposed of by United States Conciliation Service, August 1942, by Industries

Industry	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All industries.....	1, 028	1, 191, 422	258	29, 976	1, 286	1, 221, 398
Agriculture.....	1	41			1	41
Building trades.....	65	45, 592	23	1, 653	88	47, 245
Chemicals.....	37	18, 756	10	1, 001	47	19, 757
Communications.....	11	15, 947	3	77	14	16, 024
Domestic and personal.....	18	7, 879	5	1, 081	23	8, 960
Electrical equipment.....	35	225, 484	3	1, 479	38	226, 963
Food.....	79	32, 163	13	733	92	32, 896
Furniture and finished lumber.....	31	14, 831	6	211	37	15, 042
Iron and steel.....	196	339, 604	18	3, 815	214	343, 419
Leather.....	7	1, 565	16	919	23	2, 484
Lumber.....	51	79, 896	9	595	60	80, 491
Machinery.....	49	25, 078	11	1, 547	60	26, 625
Maritime.....	17	18, 652	2	56	19	18, 708
Mining.....	21	10, 880	4	934	25	11, 814
Motion pictures.....	4	259			4	259
Nonferrous metals.....	64	30, 038	7	1, 215	71	31, 252
Paper.....	16	5, 430	4	110	20	5, 540
Petroleum.....	8	1, 024	8	1, 008	16	2, 032
Printing.....	11	5, 705	2	4	13	5, 709
Professional.....	1	1			1	1
Rubber.....	10	6, 543	1	1	11	6, 544
Stone, clay, and glass.....	42	16, 368	13	655	55	17, 023
Textile.....	58	26, 383	24	2, 798	82	29, 181
Trade.....	41	21, 557	18	3, 465	59	25, 022
Transportation.....	45	49, 599	6	588	51	50, 187
Transportation equipment.....	52	171, 403	15	610	67	172, 013
Utilities.....	14	8, 019	4	38	18	8, 057
Unclassified.....	44	12, 725	33	5, 383	77	18, 108

TABLE 3.—Situations Disposed of by United States Conciliation Service, August 1942, by States

States	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All States.....	1,028	1,191,422	258	29,976	1,286	1,221,398
Alabama.....	19	5,856	3	230	22	6,086
Arizona.....	5	451	—	—	5	451
Arkansas.....	10	6,959	2	46	12	7,005
California.....	98	35,008	12	2,722	110	37,730
Colorado.....	3	929	—	—	3	929
Connecticut.....	16	22,560	—	—	16	22,560
Delaware.....	2	488	—	—	2	488
District of Columbia.....	2	705	6	1,552	8	2,257
Florida.....	22	3,072	10	245	32	3,317
Georgia.....	11	3,539	3	5	14	3,544
Idaho.....	5	6,313	—	—	5	6,313
Illinois.....	74	49,697	7	496	81	50,193
Indiana.....	39	21,605	12	676	51	22,281
Iowa.....	13	2,708	1	150	14	2,858
Kansas.....	5	1,547	—	—	5	1,547
Kentucky.....	12	2,443	3	608	15	3,051
Louisiana.....	12	6,179	7	691	19	6,870
Maine.....	1	303	—	—	1	303
Maryland.....	14	69,818	3	628	17	70,446
Massachusetts.....	24	14,381	32	1,920	56	16,301
Michigan.....	81	50,584	19	1,609	100	52,193
Minnesota.....	17	2,460	1	10	18	2,470
Mississippi.....	8	5,880	4	599	12	6,479
Missouri.....	24	8,850	7	2,134	31	10,984
Montana.....	6	2,214	1	55	7	2,269
Nebraska.....	2	80	—	—	2	80
New Hampshire.....	2	470	—	—	2	470
New Jersey.....	35	15,102	8	1,242	43	16,344
New Mexico.....	4	496	—	—	4	496
New York.....	87	245,729	22	2,550	109	248,279
North Carolina.....	7	5,685	3	801	10	6,486
Ohio.....	93	59,146	19	2,908	112	62,054
Oklahoma.....	8	1,009	2	3	10	1,012
Oregon.....	20	66,159	4	293	24	66,452
Pennsylvania.....	103	408,317	18	1,988	121	410,305
Puerto Rico.....	2	1,940	1	3	3	1,943
Rhode Island.....	6	2,567	9	812	15	3,379
South Carolina.....	3	2,194	5	74	8	2,268
South Dakota.....	1	180	—	—	1	180
Tennessee.....	30	9,601	6	566	36	10,167
Texas.....	15	6,328	5	31	20	6,359
Utah.....	1	43	—	—	1	43
Virgin Islands.....	1	53	—	—	1	53
Virginia.....	9	2,855	3	7	12	2,862
Washington.....	21	14,077	5	137	26	14,214
West Virginia.....	13	6,954	4	86	17	7,040
Wisconsin.....	42	17,888	11	4,099	53	21,987

# Housing Conditions

## FHA HOUSES IN METROPOLITAN DISTRICTS

FROM August 1934 through December 1940, more than 3,750,000 privately made housing loans aggregating over \$4,400,000,000 were insured under the various titles of the National Housing Act. Of the 709,000 Title II—Home-Mortgage loans, totaling over \$3,000,000,000, well over half were made to borrowers reporting annual incomes of less than \$2,500. The average monthly payment on these loans was approximately \$37. This information is given in a recent report of the Federal Housing Administration,<sup>1</sup> containing detailed statistics on FHA insured homes for each of the 140 metropolitan districts of the continental United States.

In spite of its relatively short period of operation, the FHA program had taken an important place in the private home-financing business of virtually every community in the country by the end of 1940. One in every 9 nonfarm homes occupied in 1940 had been repaired or modernized with the aid of a short-term property loan under title I of the National Housing Act; and 1 in 40 had been financed with a long-term amortized mortgage under title II. Altogether, 64 percent of all nonfarm dwellings are situated in the 140 metropolitan districts of the United States, and each of these metropolitan districts may be considered a complete housing market.

### *Net Volume of FHA Activity*

Although in 1940 only 48 percent of the total population was in the 140 metropolitan districts, these areas contained 64 percent of the nonfarm dwelling units and 77 percent of all FHA home mortgages.

Mortgages on new homes accounted for almost half of the total value of the FHA loans summarized in table 1, and approximately 85 percent of this new-house money was for construction inside metropolitan districts. Similarly 80 percent of the \$950,000,000 loaned on existing homes, 68 percent of the dollar value of title I property-improvement loans, and 93 percent of the money loaned on rental housing units under title II were on buildings in metropolitan districts.

Mortgages on new houses in metropolitan districts averaged about \$4,700, and on existing houses approximately \$4,100. Outside metropolitan districts, these averages were substantially less—\$3,900 on new dwellings and \$3,000 on existing ones. The 3,000,000 property improvement loans insured during this period averaged over \$400 each and accounted for over 25 percent of the total of FHA loans.

<sup>1</sup> Federal Housing Administration. *FHA Homes in Metropolitan Districts, Characteristics of Mortgages, Homes, Borrowers under the FHA Plan, 1934-1940*, Washington, 1942.



TABLE 1.—*Net Volume of FHA Activity, Cumulative from Beginning of Operations in 1934 Through December 1940*

Item	All places		Inside metropolitan districts		Outside metropolitan districts	
	Number	Amount	Number	Amount	Number	Amount
All types.....	<sup>1</sup> 3,750,121	<sup>1</sup> \$4,406,353,102	2,631,834	\$3,434,841,506	1,110,250	\$971,811,984
Home mortgages accepted for insurance under Title II.....	708,872	3,037,276,886	546,842	2,465,424,006	162,030	571,852,880
On new homes.....	457,673	2,087,621,124	358,587	1,702,233,203	99,086	385,387,921
On existing homes.....	251,199	949,655,762	188,255	763,190,803	62,944	186,464,959
Property-improvement loans insured under Title I.....	<sup>1</sup> 3,008,045	<sup>1</sup> 1,242,123,541	2,054,318	850,819,725	945,690	391,604,204
Rental housing units insured under Title II.....	33,204	126,952,675	30,674	118,597,775	2,530	8,354,950

<sup>1</sup> Includes adjustments of +8,037 and -\$300,388 for canceled, corrected, and refinanced title I notes reported 1937-1940 for which property location was not identified.

### Property and Land Valuation Characteristics

Fully half of the new homes insured during the 6½ years covered by the report had an FHA valuation of less than \$5,000, and a much larger proportion of such houses was located outside the metropolitan districts than inside. This was due in part to the increased land cost and, to a greater degree, to the larger size of the houses inside these districts. In the case of existing homes these two factors resulted in a still greater difference in valuations of homes inside and outside metropolitan districts than was the case with new homes. Details on property valuation of new and existing homes inside and outside metropolitan districts, by value classes, are given in table 2.

TABLE 2.—*Percentage Distribution of 1-Family, FHA-Insured Houses Inside and Outside Metropolitan Districts, by Property Valuation, 1940*

FHA valuation of property	Percentage distribution of—			
	New homes		Existing homes	
	Inside metropolitan districts	Outside metropolitan districts	Inside metropolitan districts	Outside metropolitan districts
\$2,999 or less.....	1.9	7.7	6.9	24.4
\$3,000-\$3,999.....	16.2	28.8	19.2	30.6
\$4,000-\$4,999.....	25.9	30.0	22.9	20.7
\$5,000-\$5,999.....	25.3	17.6	18.9	11.9
\$6,000-\$7,999.....	24.6	12.6	19.6	8.6
\$8,000-\$9,999.....	4.1	2.2	6.4	2.1
\$10,000 or more.....	2.0	1.1	6.1	1.7
All groups.....	100.0	100.0	100.0	100.0

### Structural Characteristics of 1-Family Houses

Of the new houses insured during 1940, less than 40 percent of those inside metropolitan districts, as compared with almost two-thirds of those outside metropolitan districts, were built primarily of wood. Slightly larger proportions of the existing homes had wood as the

principal exterior construction material, both inside and outside metropolitan districts, as shown in table 3.

The greatly increased popularity of the small house with 4 or 5 rooms is well illustrated in table 3. Almost 70 percent of the new dwellings insured by FHA in 1940 has 5 rooms or less, while only about 40 percent of the existing homes were of this size. Only 5 percent of the new houses had 7 or more rooms as compared to 25 percent of the existing houses. Both old and new houses inside metropolitan districts were somewhat larger than outside these districts; this was due, at least in part, to the greater cost of land inside metropolitan districts which tends to force construction of higher-priced structures.

TABLE 3.—Percentage Distribution of 1-Family, FHA-Insured Houses, by Exterior Construction Material and Size, 1940

Item	Percentage distribution of—			
	New houses		Existing houses	
	Inside metropolitan districts	Outside metropolitan districts	Inside metropolitan districts	Outside metropolitan districts
Exterior construction of—				
Wood.....	39.1	65.0	46.0	69.9
Brick.....	30.3	13.6	27.0	12.0
Stucco.....	19.9	10.1	22.6	12.4
Other.....	10.7	11.3	4.4	5.7
Total.....	100.0	100.0	100.0	100.0
Size:				
4 rooms or less.....	21.4	27.4	6.2	11.9
5 rooms.....	47.4	45.4	32.1	33.6
6 rooms.....	27.1	21.2	37.1	29.8
7 rooms or more.....	4.1	6.0	24.6	25.5
Total.....	100.0	100.0	100.0	100.0

### *Borrower's Income and Monthly Payments*

Both inside and outside the metropolitan districts, a larger proportion of the new-house sales than of the existing-house sales was made to families having incomes of less than \$2,500 annually. The average monthly payment of families with incomes of less than \$2,500 annually was about \$30. For new houses inside metropolitan districts the monthly average was slightly more than this amount and for existing houses outside metropolitan districts somewhat less. Since the gross FHA payment includes interest on the mortgage, mortgage-insurance premiums, hazard insurance, monthly cost of the local real estate tax on the property, and land rent (if the land is leased), the figures in table 4 give an indication of typical costs of owning homes financed under the FHA plan to families in various income groups.

TABLE 4.—Borrower Income Distribution and Monthly Payment, by Income Groups, for 1-Family, FHA-Insured Houses, 1940

Annual family income of borrower	Percentage distribution				Average gross monthly payment on—			
	New homes		Existing homes		New homes		Existing homes	
	Inside metropolitan districts	Outside metropolitan districts	Inside metropolitan districts	Outside metropolitan districts	Inside metropolitan districts	Outside metropolitan districts	Inside metropolitan districts	Outside metropolitan districts
\$1,499 or less.....	4.4	11.4	3.6	10.1	\$24.24	\$21.93	\$23.26	\$19.39
\$1,500 to \$1,999.....	25.8	31.4	19.9	27.5	30.13	27.16	28.39	23.74
\$2,000 to \$2,499.....	29.8	26.5	24.7	25.2	35.63	31.89	33.11	28.01
\$2,500 to \$2,999.....	14.0	10.7	13.2	10.6	39.78	35.45	37.85	31.69
\$3,000 to \$3,999.....	17.5	13.6	20.1	16.7	45.51	40.16	44.27	35.70
\$4,000 to \$4,999.....	4.6	3.5	7.6	4.7	53.60	47.62	53.24	42.75
\$5,000 or more.....	3.9	2.9	10.9	5.2	66.92	59.80	74.00	55.54
All groups.....	100.0	100.0	100.0	100.0	38.06	32.13	40.68	29.75





## Cost of Living

### CHANGES IN LIVING COSTS IN LARGE CITIES, AUGUST 15, 1942

LED by sharp increases for certain foods not under price control by OPA, the cost of living in large cities rose 0.4 percent from July 15 to August 15 bringing the Bureau of Labor Statistics index of the cost of living to 117.4 percent of the 1935-39 level and about 19 percent higher than in August 1939, just before the outbreak of war in Europe.

Price increases for foods not subject to OPA regulation amounted, on the average, to 2.2 percent from July to August and to nearly 10 percent during the 3-month period since mid-May, when the General Maximum Price Regulation became effective. For foods controlled by the OPA there was also some advance (0.5 percent) from July to August. Since May, these controlled foods have declined 0.3 percent. The total food bill went up by 1.2 percent from July to August. On the other hand, elements in the cost of living predominantly subject to regulation—clothing, rent, fuel, ice, and housefurnishings—for the most part declined slightly. Total costs of all controlled goods and services were unchanged, while costs not under control rose by 1.3 percent from July to August.

The following statement shows changes from July 15, 1942, also from May 15 to August 15, 1942.

	Percent of change to Aug. 15, 1942, from—	
	July 15, 1942	May 15, 1942
All items.....	+0.4	+1.2
Food.....	+1.2	+3.7
Controlled.....	+0.5	-.3
Uncontrolled.....	+2.2	+9.8
Clothing.....	-.2	-.9
Rents.....	-.1	-2.1
Fuel, electricity, and ice.....	-.1	+1.2
Housefurnishings.....	-.5	-.3
Miscellaneous.....	+.1	+.2

*Food costs.*—With but a few exceptions, all foods not under OPA control rose more than usual at this season of the year. Among the greatest increases over the month were those of 18 percent for lettuce, 14 percent for sweetpotatoes, 8 percent for butter, and more than 5 percent for roasting chickens, all of which were practically double the usual seasonal advances. Other increases, also somewhat greater than seasonal, were 12 percent for eggs, 16 percent for green beans, and 8 percent for dried prunes. Prices were slightly higher for wheat flour, corn meal, fresh fish, cheese, oranges, navy beans, and other items. Prices of apples, potatoes, cabbage, and onions showed large seasonal declines. As a group, these uncontrolled products account for about 40 percent of the average urban family's food budget.

On the whole, there was little change in food prices covered by OPA regulation. Many of these prices, such as those for white and rye bread, macaroni, canned salmon, and milk showed no increases. For a few other products, particularly beef and pork, there were price increases of 1 to 2 percent, which, however, were relatively small compared with advances for uncontrolled foodstuffs. Average costs for lamb, which came under control on August 1, showed no change over the month. Taken as a whole, these controlled foods have shown an average decline of 0.3 percent since the imposition of the General Maximum Price Regulation in mid-May.

*Rents.*—As more cities have been brought under Federal rent control, there has been a steady decline in the Bureau of Labor Statistics index of rents in large cities, amounting on the average to 2 percent in the last 3 months. From mid-July to mid-August, there were reductions in 7 of the cities surveyed, with an average decline for all cities of 0.1 percent. Reductions were greatest in crowded defense areas such as Seattle, where advances in rents had previously been very marked. Fourteen of the cities surveyed are now subject to Federal control, including Denver, where control went into effect on August 1.

*Other living costs.*—Costs of clothing, housefurnishings, and fuels have also been declining. August sales were largely responsible for price reductions of 0.2 percent and 0.5 percent, respectively, for clothing and housefurnishings. Women's percale dresses, men's wool suits, children's shoes, sheets, and furniture were among the goods affected.

Costs of fuel, electricity, and ice declined slightly. In the East there were price reductions for fuel oil (as well as for gasoline), following an OPA order rescinding an earlier increase, and absorbing higher freight costs, which are now covered by Government subsidies. On the other hand, a small net increase was reported in the average cost of miscellaneous goods and services.

TABLE 1.—Percent of Change in Cost of All Goods Purchased by Wage Earners and Lower-Salaried Workers in Large Cities, for Specified Dates

City	Percent of change from—		City	Percent of change from—	
	Aug. 15, 1941, to Aug. 15, 1942	Dec. 15, 1940, to Aug. 15, 1942		Aug. 15, 1941, to Aug. 15, 1942	Dec. 15, 1940, to Aug. 15, 1942
Average: Large cities.....	+10.5	+16.6	West North Central—Con.		
New England: Boston.....	+9.6	+16.3	St. Louis.....	+11.6	+16.1
Middle Atlantic:			South Atlantic:		
Buffalo.....	+10.8	+18.4	Baltimore.....	+10.7	+18.3
New York.....	+10.1	+15.2	Savannah.....	+12.2	+19.7
Philadelphia.....	+11.5	+17.8	Washington, D. C.....	+11.1	+17.3
Pittsburgh.....	+9.4	+15.5	East South Central:		
East North Central:			Birmingham.....	+9.7	+16.5
Chicago.....	+9.5	+15.7	West South Central:		
Cincinnati.....	+10.3	+17.9	Houston.....	+11.2	+15.1
Cleveland.....	+8.5	+16.0	Mountain: Denver.....	+10.9	+16.1
Detroit.....	+9.1	+16.3	Pacific:		
West North Central:			Los Angeles.....	+13.7	+18.6
Kansas City.....	+11.2	+16.4	San Francisco.....	+12.5	+17.7
Minneapolis.....	+8.5	+13.9	Seattle.....	+11.8	+19.1

Among the largest increases in service costs were those for services not under Federal control, such as those provided by barbers, beauty

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parlors, physicians, hospitals, and movies, which have been advancing steadily for some time. With the increases of the past month, prices of men's haircuts have gone up by 5 percent since last March, women's beauty parlor services by 3½ percent, medical care by more than 2 percent, and movies by 2 percent. During the past month reductions in a few cities were reported for laundry services, which became subject to OPA control on July 1.

The percent of change over the month ending August 15, 1942, for the various groups of items, by cities, is shown in table 2.

TABLE 2.—Percent of Change, July 15 to August 15, 1942, in Cost of Goods Purchased by Wage Earners and Lower-Salaried Workers in Large Cities, by Groups of Items

City	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Average: Large cities.....	+0.4	<sup>1</sup> +1.2	<sup>2</sup> -0.2	<sup>2</sup> -0.1	<sup>2</sup> -0.1	<sup>2</sup> -0.5	<sup>2</sup> +0.1
New England: Boston.....	- .4	- .1	- .1	( <sup>4</sup> )	-3.4	( <sup>4</sup> )	- .2
Middle Atlantic:							
Buffalo.....	- .3	- .2	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	- .9	-1.0
New York.....	+ .9	+1.9	( <sup>4</sup> )	( <sup>4</sup> )	+3.5	- .6	( <sup>4</sup> )
Philadelphia.....	+ .3	+ .9	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	- .2
Pittsburgh.....	+ .1	+ .7	- .2	- .1	( <sup>4</sup> )	-1.5	- .6
East North Central:							
Chicago.....	<sup>3</sup> + .8	<sup>3</sup> +2.2	-1.0	( <sup>4</sup> )	( <sup>4</sup> )	- .8	( <sup>4</sup> )
Cincinnati.....	+ .6	+1.3	+ .2	( <sup>4</sup> )	- .7	-1.8	+ .8
Cleveland.....	- .2	- .6	( <sup>4</sup> )	+ .1	( <sup>4</sup> )	- .3	+ .2
Detroit.....	- .4	-1.0	( <sup>4</sup> )	- .2	( <sup>4</sup> )	- .2	( <sup>4</sup> )
West North Central:							
Kansas City.....	+1.0	+2.5	- .1	+ .1	( <sup>4</sup> )	- .9	+ .5
Minneapolis.....	+ .3	+ .7	+ .2	+ .3	( <sup>4</sup> )	-1.0	+ .1
St. Louis.....	+ .9	+2.4	- .2	- .2	( <sup>4</sup> )	+ .1	+ .2
South Atlantic:							
Baltimore.....	+ .5	+1.0	- .7	- .2	- .2	- .1	+1.1
Savannah.....	( <sup>4</sup> )	+ .2	( <sup>4</sup> )	( <sup>4</sup> )	+ .1	( <sup>4</sup> )	- .6
Washington, D. C.....	+ .4	+1.8	- .4	( <sup>4</sup> )	- .4	- .3	- .4
East South Central: Birmingham.....	+1.3	+4.0	-1.3	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
West South Central: Houston.....	+ .8	+1.4	+ .1	+ .4	+ .1	( <sup>4</sup> )	+ .8
Mountain: Denver.....	+ .3	+1.3	( <sup>4</sup> )	- .2	+ .3	( <sup>4</sup> )	-1.1
Pacific:							
Los Angeles.....	+1.1	+2.4	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	+ .7
San Francisco.....	+1.3	+2.8	- .1	- .3	+ .6	( <sup>4</sup> )	+ .9
Seattle.....	+1.7	+4.0	+1.7	- .7	( <sup>4</sup> )	+ .2	( <sup>4</sup> )

<sup>1</sup> Based on data for 51 cities.

<sup>2</sup> Based on data for 21 cities.

<sup>3</sup> Based on data for 34 cities.

<sup>4</sup> No change.

<sup>5</sup> Indexes for July revised: All items 116.0, food 122.8.

Indexes, based on the average over the period 1935-39 as 100, are given in table 3 for each of the groups of items, by cities.



TABLE 3.—*Indexes of Cost of Goods Purchased by Wage Earners and Lower-Salaried Workers in Large Cities, by Groups of Items, August 15, 1942*

[Average 1935-39=100]

City	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Average: Large cities.....	117.4	<sup>1</sup> 126.1	<sup>2</sup> 125.1	<sup>3</sup> 107.6	<sup>3</sup> 106.2	<sup>2</sup> 121.8	<sup>2</sup> 111.1
New England: Boston.....	115.3	122.5	121.7	104.9	116.7	118.0	109.1
Middle Atlantic:							
Buffalo.....	120.4	127.6	127.1	114.2	103.6	125.0	117.5
New York.....	116.2	125.1	125.4	103.0	109.0	117.8	110.5
Philadelphia.....	116.7	124.0	126.0	106.7	103.6	121.6	111.2
Pittsburgh.....	116.8	125.0	126.7	107.5	108.4	121.6	109.6
East North Central:							
Chicago.....	116.9	125.5	119.6	112.7	103.5	118.8	110.3
Cincinnati.....	117.4	125.8	128.2	104.7	102.4	123.5	111.5
Cleveland.....	118.3	126.0	127.2	112.1	112.1	123.1	110.6
Detroit.....	117.3	123.7	125.5	110.8	106.9	120.8	113.2
West North Central:							
Kansas City.....	114.8	121.2	122.2	108.5	106.0	115.7	111.1
Minneapolis.....	116.4	122.9	124.3	109.8	98.9	122.9	114.5
St. Louis.....	117.3	129.0	126.7	105.9	106.2	116.2	109.2
South Atlantic:							
Baltimore.....	118.9	129.6	124.9	105.7	104.0	127.6	112.5
Savannah.....	121.5	132.3	126.9	114.9	107.6	120.1	113.4
Washington, D. C.....	116.9	127.5	131.5	100.7	103.5	128.5	113.4
East South Central: Birmingham.....	118.7	126.1	124.7	120.4	99.5	119.3	111.6
West South Central: Houston.....	117.6	130.0	126.7	109.0	93.2	122.5	110.5
Mountain: Denver.....	116.3	126.0	123.2	108.9	99.4	122.0	109.5
Pacific:							
Los Angeles.....	121.2	136.8	127.0	110.0	94.2	118.2	112.8
San Francisco.....	119.6	130.2	125.4	106.1	94.6	119.6	116.3
Seattle.....	121.5	136.1	128.9	110.1	100.7	119.7	113.3

<sup>1</sup> Based on data for 51 cities.<sup>2</sup> Based on data for 21 cities.<sup>3</sup> Based on data for 34 cities.

Indexes showing the trend of the cost of the various groups of items from 1935 through August 15, 1942, are given in table 4.

TABLE 4.—*Indexes of Cost of Goods Purchased by Wage Earners and Lower-Salaried Workers in Large Cities, by Years 1935-41, by Months January 1941-August 1942*

[Average 1935-39=100]

Year	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
1935.....	98.1	100.4	96.8	94.2	100.7	94.8	98.1
1936.....	99.1	101.3	97.6	96.4	100.2	96.3	98.7
1937.....	102.7	105.3	102.8	100.9	100.2	104.3	101.0
1938.....	100.8	97.8	102.2	104.1	99.9	103.3	101.5
1939.....	99.4	95.2	100.5	104.3	99.0	101.3	100.7
1940.....	100.2	96.6	101.7	104.6	99.7	100.5	101.1
1941.....	105.2	105.5	106.5	105.9	102.5	108.2	104.0
Jan. 15.....	100.8	97.8	100.7	105.0	100.8	100.1	101.9
Feb. 15.....	100.8	97.9	100.4	105.1	100.6	100.4	101.9
Mar. 15.....	101.2	98.4	102.1	105.1	100.7	101.6	101.9
Apr. 15.....	102.2	100.6	102.4	105.4	101.0	102.4	102.2
May 15.....	102.9	102.1	102.8	105.7	101.1	103.2	102.5
June 15.....	104.6	105.9	103.3	105.8	101.4	105.3	103.3
July 15.....	105.3	106.7	104.8	106.1	102.3	107.4	103.7
Aug. 15.....	106.2	108.0	106.9	106.3	103.2	108.9	104.0
Sept. 15.....	108.1	110.7	110.8	106.8	103.7	112.0	105.0
Oct. 15.....	109.3	111.6	112.6	107.5	104.0	114.4	106.9
Nov. 15.....	110.2	113.1	113.8	107.8	104.0	115.6	107.4
Dec. 15.....	110.5	113.1	114.8	108.2	104.1	116.8	107.7
1942.....							
Jan. 15.....	112.0	116.2	116.1	108.4	104.3	118.2	108.5
Feb. 15.....	112.9	116.8	119.0	108.6	104.4	119.7	109.4
Mar. 15.....	114.3	118.6	123.6	108.9	104.5	121.2	110.1
Apr. 15.....	115.1	119.6	126.5	109.2	104.3	121.9	110.6
May 15.....	116.0	121.6	126.2	109.9	104.9	122.2	110.9
June 15.....	116.4	123.2	125.3	108.5	105.0	122.3	110.9
July 15.....	116.9	124.6	125.3	107.7	106.3	122.4	111.0
Aug. 15.....	117.4	126.1	125.1	107.6	106.2	121.8	111.1

CHANGES IN LIVING COSTS, MAY-AUGUST 1942<sup>1</sup>

AT THE time price controls were established in May 1942, living costs of moderate-income American city families had risen to a point 17.6 percent above the level of August 1939, before the outbreak of war in Europe. This meant that these families had to spend \$1.18 in May 1942 to buy goods and services for which they paid \$1.00 in August 1939. Thus, a city family spending \$125 in August 1939 would have had to spend \$22 more in the month of May 1942 to buy the same things that it purchased in a summer month of 1939. The total cost of the goods that farm families buy had increased even more, 23 percent. The situation for farm families is somewhat mitigated by the fact that farm families frequently do not have to buy all of their food.

By August of this year, living costs were more than 19 percent above the level of costs 3 years earlier. The most rapid rise occurred during the year ending March 15, 1942, when the average increase was more than 1 percent a month. The following table shows changes in the cost of goods purchased by wage earners and lower-salaried workers by groups of items since August 15, 1939.

TABLE 1.—Percent of Change in Living Costs to Wage Earners and Lower-Salaried Workers in Large Cities Combined, August 15, 1939, to August 15, 1942

Date	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Total changes in costs:							
Aug. 15, 1939-Aug. 15, 1942	+19.1	+34.9	+24.7	+3.2	+8.9	+21.1	+10.7
Aug. 15, 1939-Dec. 15, 1941	+12.1	+21.0	+14.5	+3.7	+6.8	+16.1	+7.3
Mar. 15, 1941-Mar. 15, 1942	+12.9	+20.5	+21.1	+3.6	+3.8	+19.3	+8.0
Dec. 15, 1941-Aug. 15, 1942	+6.2	+11.5	+9.0	-.6	+2.0	+4.3	+3.2
Change in cost, by months:							
Average per month—							
Aug. 15, 1939-Aug. 15, 1942	+.5	+1.0	+.7	+.1	+.2	+.6	+.3
Mar. 15, 1941-Mar. 15, 1942	+1.1	+1.7	+1.8	+.3	+.3	+1.6	+.7
Dec. 15, 1941-Jan. 15, 1942	+1.4	+2.7	+1.1	+.2	+.2	+1.2	+.7
Jan. 15, 1942-Feb. 15, 1942	+.8	+.5	+2.5	+.2	+.1	+1.3	+.8
Feb. 15, 1942-Mar. 15, 1942	+1.2	+1.5	+3.9	+.3	+.1	+1.3	+.6
Mar. 15, 1942-Apr. 15, 1942	+.7	+.8	+2.3	+.3	-.2	+.6	+.5
Apr. 15, 1942-May 15, 1942	+.8	+1.7	-.2	+.6	+.6	+.2	+.3
May 15, 1942-June 15, 1942	+.3	+1.3	-.7	-1.3	+.1	+.1	(1)
June 15, 1942-July 15, 1942	+.4	+1.1	(1)	-.7	+1.2	+.1	+.1
July 15, 1942-Aug. 15, 1942	+.4	+1.2	-.2	-.1	-.1	-.5	+.1

<sup>1</sup> No change.

In spite of increased prices, people of the United States on the whole had larger real incomes in 1941 than in any other period of our history. The demand for farm products was heavy, and farmers generally were receiving higher prices than at any time since 1930. Thus, in 1941, despite rising prices, increased taxes, and the operation of priorities, the average American family was in a position to purchase a greater volume and variety of goods than at any previous period. In 1941, per capita real income payments were 15 percent above the 1929 level and the per capita real value of retail sales was 13 percent above its 1929 level. Total consumer expenditures for the year were more than 70 billion dollars.

The value of all production and services in 1941 was more than 90 billion dollars. Activity increased throughout the year and by the

<sup>1</sup> Prepared by Frances R. Rice of the Bureau's Cost of Living Division.

end of 1941 the annual rate of income payments was close to 100 billion dollars. At the end of 1941, more than 90 percent of the labor force was at work, and plant capacity was being utilized more fully than ever before.

All workers, however, were not sharing alike in the marked increase in the national income. While increases in average hourly earnings for workers in heavy industries were more than sufficient to cover the increase in the cost of living since August 1939, many workers such as those in retail and wholesale trade, telephone and telegraph services, and municipal, State, and Federal employment have had smaller increases or even reductions in real income. The Bureau of Labor Statistics' data on average hourly earnings show that, taking into account the increase in cost of living, the "real" hourly earnings of workers in mining, manufacturing, and steam railroads increased on the average 9.7 percent from August 1939 to June 1942 and 2.2 percent for workers in wholesale trade. Over the same period, "real" hourly earnings of workers in retail trade decreased 4.1 percent, and those of telephone and telegraph workers decreased 12.3 percent.

The following pages describe in detail the changes in costs during the first half of 1942.

### Cost of Food

On August 15, 1942, the food bill of the average American city family was more than 26 percent above the 1935-39 average and 35 percent above the relatively low price level of August 1939, the month before the outbreak of war in Europe. Although food prices have increased greatly in the period since August 1939, the rate of increase has not been as high as during the first 3 years of the last war, when there was an increase of almost 42 percent.

With increased incomes in 1941 and 1942, the demands of American families for food and particularly meats, fruits, and dairy products were greater than in the 30's. A shortage of ships was also contributing to the problem of imported food supplies. The Army was making large purchases of certain foods, not ordinarily consumed in such large quantities, for men in the training camps; and the Federal Government was buying other foods for shipment abroad under the lend-lease program. The curve of food prices, therefore, went up steeply in 1941 and in 1942 until the middle of May.

The foods for which prices are fixed by the General Maximum Price Regulation account for about 60 percent of the food bill of the average American family. Section 3 of the Emergency Price Control Act passed by Congress on January 29, 1942, provides that prices of agricultural commodities shall not be fixed until their value in exchange to the farmer is 10 percent higher than their average exchange value in the years 1909 to 1914, that is, until they have reached 110 percent of parity. The statute provides further that ceilings cannot be imposed on any product at a level below the market price on October 1, 1941, or December 15, 1941, or the average price for the period July 1, 1919, to June 30, 1929, or below 110 percent of current parity, whichever of those four levels is highest. Because of this limitation, no price controls at the retail level have been placed on butter, cheese, eggs, poultry, mutton, evaporated and condensed milk, flour, loose corn meal, dried prunes, and dried beans. Lamb was originally included in this list, but has since been placed under control. Citrus



fruit juices, originally controlled, were later removed from control. Fresh fruits and vegetables (except bananas) and fresh fish and sea food are also not covered by the price order.<sup>2</sup>

Controlled foods dropped 1.0 percent, between mid-May and mid-June, but rose 0.3 percent in the following month and another 0.5 percent in the month ending August 15, largely as a result of higher prices for meats and packaged foods. The cost of uncontrolled foods, in mid-August, was nearly 10 percent above the level of their costs in May.

The percent of change, over several periods, in prices for all foods included in the cost-of-living index, in two groups—those included under the General Maximum Price Regulation and those not so included—are shown in table 2.

TABLE 2.—Percentage Changes in Food Costs in 51 Cities Combined, from Specified Dates to August 15, 1942

Item	Unit	Percent of change to Aug. 15, 1942, from—			
		Aug. 15, 1939	Dec. 16, 1941	Mar. 17, 1942	May 12, 1942
All foods.....		+34.9	+11.5	+6.3	+3.7
Cereals and bakery products.....		+12.7	+2.7	+1.5	+1.1
Meats.....		+35.3	+16.6	+7.5	+4.2
Dairy products.....		+35.1	+4.4	+3.4	+2.0
Eggs.....		+60.5	+5.4	+29.9	+26.2
All fruits and vegetables.....		+44.9	+20.5	+7.9	+3.4
Fresh.....		+45.8	+21.9	+9.4	+4.1
Canned.....		+34.2	+15.6	+1.7	+2.2
Dried.....		+53.8	+17.4	+8.6	+5.9
Beverages.....		+30.1	+8.2	+3.3	-.9
Fats and oils.....		+42.5	+11.0	+3.1	-1.6
Sugar.....		+32.5	+10.8	-1.4	-3.3
<i>Foods subject to OPA regulation</i>					
Cereals:					
Macaroni.....	Pound.....	0	+7.7	-7.7	-7.7
Wheat cereal <sup>1</sup> .....	28-oz.....	-8	+4	-4	-4
Corn flakes.....	8-oz.....	0	0	-2.7	-1.4
Rice <sup>1</sup> .....	Pound.....	+63.2	+31.9	+4.2	+1.6
Rolled oats <sup>1</sup> .....	do.....	+20.8	+14.5	+3.6	0
Bakery products:					
Bread, white.....	do.....	+10.1	+1.2	0	0
Bread, whole-wheat.....	do.....	+4.4	0	0	0
Bread, rye.....	do.....	+5.4	+1.0	+1.0	0
Vanilla cookies.....	do.....	(?)	+7.0	+1.8	-4
Soda crackers.....	do.....	+9.3	+7.8	+6	+6
Meats:					
Beef:					
Round steak.....	do.....	+20.9	+9.7	+4.8	-5
Rib roast.....	do.....	+17.8	+8.2	+4.9	+1.2
Chuck roast.....	do.....	+31.4	+10.0	+3.8	+2.8
Veal: Cutlets.....	do.....	+29.1	+11.7	+4.6	+1.9
Pork:					
Chops.....	do.....	+39.7	+24.3	+7.2	-7
Bacon, sliced.....	do.....	+30.7	+11.1	+4.2	+1.8
Ham, sliced <sup>1</sup> .....	do.....	+27.6	+13.0	+2.6	+7
Ham, whole.....	do.....	+38.7	+19.1	+2.7	+5
Salt pork.....	do.....	+48.1	+17.3	+3.9	-1.2
Lamb:					
Leg.....	do.....	+36.6	+23.6	+20.1	+11.5
Rib chops.....	do.....	+27.9	+22.5	+24.8	+13.3
Fish:					
Salmon, pink.....	16-oz can.....	+66.9	+8.5	+1.4	-5
Salmon, red <sup>1</sup> .....	do.....	+73.4	+9.5	+3.1	+5
Dairy products:					
Milk, fresh (delivered).....	Quart.....	+25.0	+1.4	-7	+7
Milk, fresh (grocery).....	do.....	+22.7	-1.5	-7	0
Milk, fresh (average retail).....	do.....	+23.9	+7	-7	+7
Fresh fruits: Bananas.....	Pound.....	+63.9	+33.3	+2.0	-16.7
Canned fruits:					
Peaches.....	No. 2½ can.....	+39.6	+9.3	+2.6	+1.3
Pineapple.....	do.....	+29.6	+22.7	+4.9	+1.8

See footnotes at end of table.

<sup>2</sup> For a discussion of the General Maximum Price Regulation—the circumstances leading to its adoption its provisions, and its effects—see article on page 659 of this issue.

TABLE 2.—Percentage Changes in Food Costs in 51 Cities Combined, from Specified Dates to August 15, 1942—Continued

Item	Unit	Percent of change to Aug. 15, 1942, from—			
		Aug. 15, 1939	Dec. 16, 1941	Mar. 17, 1942	May 12, 1942
<i>Foods subject to OPA regulation—Con.</i>					
Canned vegetables:					
Beans, green <sup>1</sup> .....	No. 2 can.....	+39.4	+12.2	+1.5	-1.4
Corn.....	do.....	+26.0	+7.4	+2.3	+7.8
Peas.....	do.....	+8.7	+4.9	-3.8	-5.1
Tomatoes.....	do.....	+36.0	+17.0	-1.7	-3.3
Beverages:					
Coffee.....	Pound.....	+29.0	+7.4	+3.6	0
Tea.....	¼ pound.....	+29.9	+14.7	+6.1	+9.9
Cocoa <sup>1</sup> .....	½ pound.....	+17.2	+10.9	+2.0	0
Fats and oils:					
Lard.....	Pound.....	+74.5	+12.5	+3.0	-4.5
Shortening, other than lard:					
In cartons.....	do.....	(2)	+9.5	+1.6	-1.0
In other containers.....	do.....	(2)	+4.6	-1.6	-3.9
Salad dressing.....	Pint.....	(2)	+5.9	+2.0	-7.8
Oleomargarine.....	Pound.....	+39.1	+13.7	+1.8	0
Peanut butter <sup>1</sup> .....	do.....	+49.7	+34.0	+14.5	-4
Sugar and sweets:					
Sugar.....	do.....	+32.5	+10.8	-1.4	-3
Corn syrup <sup>1</sup> .....	24-ounces.....	+10.3	+6.4	+4.2	+1.4
Molasses <sup>1</sup> .....	18-ounces.....	+8.1	+8.1	+3.5	+1.4
<i>Foods not subject to OPA regulation</i>					
Cereals:					
Flour, wheat.....	10 pounds.....	+45.0	+6.0	+6	+1.2
Corn meal.....	Pound.....	+11.4	+11.4	+4.3	+4.3
Meats:					
Poultry: Roasting chickens.....	do.....	+38.6	+30.8	+17.6	+16.3
Fish (fresh, frozen).....	do.....	(2)	+18.6	+2.2	+11.6
Dairy products:					
Butter.....	do.....	+57.1	+14.4	+14.7	+5.9
Cheese.....	do.....	+40.5	-1.4	-2.6	0
Milk, evaporated.....	14½ oz.....	+27.9	-1.1	-1.1	0
Eggs.....	Dozen.....	+60.5	+5.4	+29.9	+26.2
Fresh fruits:					
Apples.....	Pound.....	+50.0	+17.9	+6.5	-12.0
Oranges.....	Dozen.....	+27.8	+31.7	+36.7	+25.8
Grapefruit <sup>1</sup> .....	Each.....	(2)	+68.0	+75.0	+35.5
Fresh vegetables:					
Beans, green.....	Pound.....	+70.4	+7.1	-43.2	-9.7
Cabbage.....	do.....	+13.5	+5.0	+2.4	-6.7
Carrots.....	Bunch.....	+44.7	-5.6	+3.0	+3.0
Lettuce.....	Head.....	+79.3	+19.5	+50.0	+59.8
Onions.....	Pound.....	+25.0	-11.8	-40.8	-33.8
Potatoes.....	15 pounds.....	+45.6	+23.8	+2.9	-6.6
Spinach.....	Pound.....	+30.9	+35.9	+51.4	+45.2
Sweetpotatoes.....	do.....	+62.7	+88.6	+66.0	+53.7
Canned fruits and vegetables: Grapefruit juice. <sup>1</sup>	No. 2 can.....	(2)	+21.9	+18.2	+20.6
Dried fruits and vegetables:					
Dried fruits: Prunes.....	Pound.....	+53.9	+28.0	+16.1	+11.4
Dried vegetables: Navy beans.....	do.....	+52.5	+5.9	0	0

<sup>1</sup> Not included in index.<sup>2</sup> Comparable prices not available.<sup>3</sup> 1942 pack removed from control on July 29, 1942.

## Cost of Clothing

Clothing prices reached a peak in April 1942. In mid-December 1941, average clothing costs to moderate-income families had reached a point 14.5 percent above the level of August 1939. They continued to advance rapidly, and by April were 26 percent above the pre-war level. Over the comparable period in the last war, the increase was 27 percent.

The most striking increase occurred in prices of cotton clothing, largely as a result of the needs of the Army and of wage earners in

industry, which put a strain on loom capacity. At the peak, in April 1942, men's work shirts were 52 percent higher in price than in the summer of 1939. Prices of overalls were 49 percent higher; of work trousers, 38 percent; and of undershirts, 37 percent. Business shirts, important to the clerical worker, were 28 percent above their average price in the summer of 1939.

Women's cotton clothing has also been much affected by the diversion of looms to the production of service and work uniforms. As a matter of fact, women's percale dresses have gone up in price more than any other article priced outside of the food group, and on April 15, 1942, were 59 percent higher than in the summer of 1939. Prices of women's voile dresses had risen by one-third.

Advances in wool-clothing prices were not as striking as increases in some types of cotton clothing, but were nevertheless considerable. Costs of men's wool suits were up 32 percent, felt hats 30 percent, and topcoats 22 percent.

All articles of clothing are covered by the General Maximum Price Regulation. In many cases, retailers brought their prices to ceiling levels even before the effective date of the regulations. Between April 15 and May 15, 1942, a drop in clothing costs was shown in 13 of the 21 cities surveyed by the Bureau of Labor Statistics in that period. Between May 15 and June 15, after the effective date of the General Maximum Price Regulation, price decreases were reported in all of these cities. By June 15, clothing costs were 1 percent below the average April 15 level, as a result of declines in all important articles of clothing, and by August 15, following the special sales usual in this month, average clothing costs were 1.1 percent below April levels.

The largest declines in clothing prices occurred for shoes, underwear, overalls, and other work clothes, and for men's shirts, all of which returned to a point midway between the March 15 and April 15 level. Women's percale dresses, however, were still above the mid-April level.

Table 3 shows the percent of change to August 15, 1942, in the cost of important articles of clothing. Several articles were still (in August 1942) from 35 to 50 percent above pre-war levels.

TABLE 3.—Percent of Change in Cost of Important Articles of Clothing to Wage Earners and Lower-Salaried Workers

Article	Percent of change in cost to Aug. 15, 1942, from—			Article	Percent of change in cost to Aug. 15, 1942, from—		
	Sept. 15, 1939	Dec. 15, 1941	Apr. 15, 1942		Sept. 15, 1939	Dec. 15, 1941	Apr. 15, 1942
<i>Men's clothing</i>				<i>Women's clothing</i>			
Work shirts.....	+51.2	+12.7	-1.0	Percale dresses.....	+61.7	+11.1	-3.5
Overalls.....	+47.2	+11.9	-1.5	Percale yard goods.....	<sup>1</sup> +53.1	<sup>1</sup> +16.7	<sup>2</sup> +1.2
Work trousers.....	+36.7	+11.4	-1.4	Slips.....	+30.6	+6.3	-7
Undershirts.....	+36.5	+15.2	-7	Silk hose.....	+28.2	+8.1	-1.3
Work shoes.....	+32.1	+10.4	-1.6	Panties.....	+23.8	+8.1	-1.7
Wool suits.....	+30.7	+13.4	-1.1	Children's shoes.....	+22.6	+7.4	-1.3
Hats.....	<sup>1</sup> +28.8	<sup>1</sup> +12.1	<sup>1</sup> -1.1	Girdles.....	+21.6	+11.1	-2.5
Street shoes.....	+28.0	+9.8	-6	Hats.....	+18.1	+9.9	-6
Business shirts.....	+26.9	+12.5	-1.1	Shoes.....	+13.9	+6.1	-4

<sup>1</sup> Not priced Aug. 15, 1942; computed to June 15, 1942.

<sup>2</sup> Not priced Apr. 15 or Aug. 15, 1942; change computed from Mar. 15 to June 15, 1942.



### Cost of Housefurnishings

As in the case of clothing, the cost of housefurnishings moved upward very rapidly in the early months of 1942. From a point 16.1 percent above pre-war levels, in December 1941, they reached a peak in mid-July, 21.7 percent above costs in the fall of 1939. The increase over the comparable period in World War I was 36 percent.

Furniture prices and prices of electrical equipment led the advance. Prices of many articles in these two groups in mid-May of this year were 20 to 40 percent above pre-war levels.

But as in the case of clothing, all articles of housefurnishings were brought under price control on May 18, the effective date of the General Maximum Price Regulation. Accordingly, mid-June prices for some articles of housefurnishings showed a decline. Mattress prices, for example, dropped 0.9 percent between May 15 and June 15. On the average, however, prices of housefurnishings rose 0.1 percent between May 15 and June 15, as a result of price increases in a few stores in a few cities. In some cases these increases were due to return to the March level after sales in May. Although most articles of housefurnishings were still higher on June 15 than on March 15, a few—medium-quality bedroom suites and bedsheets, for example—had dropped below the March 15 level. (It should be remembered that the General Maximum Price Regulation requires that prices be returned to the "highest March level," not to the level of March 15.)

More important, however, than the price declines in housefurnishings was the fact that many articles of housefurnishings were no longer available for purchase in retail stores in June. Production of almost all household durable goods had been stopped earlier in the year. By mid-June, it was virtually impossible to buy (and, therefore, to price) washing machines, refrigerators, stoves, and similar articles in many of the large cities throughout the country. In one city, for example, almost half (in value) of the articles which make up the housefurnishings group in the cost-of-living index could not be priced.<sup>3</sup>

By mid-August, the cost of housefurnishings, particularly of sheets and furniture which were on sale, had dropped further, so that average costs for this group of articles, on August 15, were 0.3 percent below mid-May levels. Percentage changes in cost of each of the articles included in the housefurnishings index, from specified dates to August 15, 1942, are given in table 4.

<sup>3</sup> In computing the index, therefore, the policy inaugurated by the Bureau of Labor Statistics in January was followed, and these goods, in the cities where they could not be priced, were eliminated from the comparison of living costs on June 15. It was assumed, furthermore, that family expenditures which were formerly spent for these goods are not now used to buy other housefurnishings, and the weight for those articles has, therefore, been transferred to the group of "unallocated" expenditures.

TABLE 4.—Percent of Change in Cost of All Housefurnishings Included in Cost-of-Living Index

Article	Percent of charge in cost to Aug. 15, 1942, from—			
	Sept. 15, 1939	Dec. 15, 1941	Mar. 15, 1942	May 15, 1942
Sheets.....	+45.3	+9.8	-2.8	-3.4
Towels.....	<sup>1</sup> +40.3	<sup>1</sup> +15.1	( <sup>1</sup> *)	( <sup>2</sup> )
Living-room suites.....	+36.6	+2.3	-.2	-.6
Bedroom suites.....	+27.3	+2.1	-.5	-.5
Studio couches.....	<sup>1</sup> +26.2	<sup>1</sup> +4.7	<sup>1</sup> -.7	( <sup>2</sup> )
Dining-room suites.....	<sup>1</sup> +26.0	<sup>1</sup> +2.6	<sup>1</sup> +2.2	( <sup>2</sup> )
Mattresses.....	+25.7	+4.4	( <sup>3</sup> )	-.9
Stoves.....	+25.4	+4.2	+3	-.4
Curtains.....	<sup>1</sup> +25.2	<sup>1</sup> +6.6	<sup>1</sup> +1.0	( <sup>2</sup> )
Rugs, wool.....	+23.6	+3.6	+3	-.5
Dinnerware.....	<sup>1</sup> +21.2	<sup>1</sup> +3.4	<sup>1</sup> +8	( <sup>2</sup> )
Brooms.....	<sup>1</sup> +19.2	<sup>1</sup> +6.1	<sup>1</sup> +2.4	( <sup>2</sup> )
Bedsprings.....	<sup>1</sup> +15.9	<sup>1</sup> +1.7	( <sup>4</sup> )	( <sup>2</sup> )
Glassware.....	<sup>1</sup> +5.8	<sup>1</sup> +3.0	( <sup>4</sup> )	( <sup>2</sup> )
Sewing machines.....	<sup>1</sup> +4.6	<sup>1</sup> -1.7	( <sup>4</sup> )	( <sup>2</sup> )
Felt-base floor covering.....	+3.6	+2.8	( <sup>5</sup> )	( <sup>3</sup> )
Linoleum.....	<sup>1</sup> -.6	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>2</sup> )
Light bulbs.....	<sup>1</sup> -14.8	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>2</sup> )
Blankets.....	<sup>1</sup> +28.0	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>3</sup> )

<sup>1</sup> Not priced in August 1942; changes to June 15, 1942.<sup>2</sup> Not priced in May or August.<sup>3</sup> No change.<sup>4</sup> Not priced in August 1942; no change to June 15, 1942.<sup>5</sup> Not priced during summer months. Change shown from Sept. 15, 1939, to Mar. 15, 1942.

### Rent Charges

The average rent bill of moderate-income city families was 3.7 percent higher in December 1941 than in the fall of 1939. It was 4.4 percent higher in March 1942, and had dropped to a point 3.2 percent higher by August 1942. Although this average advance was not extreme, the increases varied widely from city to city, and in localities seriously affected by war activities, rental costs rose abruptly.

To alleviate the hardship caused by unreasonably sharp increases in rental charges, the Office of Price Administration designated several hundred localities throughout the country as "defense rental areas." In these areas a date was established (varying from city to city) as a ceiling date to which rental costs were to return. In most areas this date was March 1942. The Office of Price Administration then provided that Federal control would be imposed in any area in which recommended reductions had not taken place by 60 days after the ceiling recommendations were made. The Maximum Rent Regulation placed a ceiling on rents as of a specified date and called for the registration by landlords of all dwelling units, whether currently occupied or not.

Federal control of rents for every type of housing accommodations became effective with June rentals in 20 areas, in 55 areas with July rentals, and in 21 areas with August rentals, making a total of 96 areas under Federal rent control by mid-August. Of the 34 large cities for which the Bureau of Labor Statistics prepares cost-of-living indexes, 22 are included in these 96 areas. These 22 cities and the date at which the rent ceiling was established in each of these cities are shown in the accompanying statement.

*Cities in Which Federal Control of Rents Was Imposed by August 1942*

	Ceiling date
Atlanta, Ga.....	Mar. 1, 1942
Baltimore, Md.....	Apr. 1, 1941
Birmingham, Ala.....	Do.
Buffalo, N. Y.....	Mar. 1, 1942
Chicago, Ill.....	Do.
Cleveland, Ohio.....	July 1, 1941
Denver, Colo.....	Mar. 1, 1942
Detroit, Mich.....	Apr. 1, 1941
Indianapolis, Ind.....	July 1, 1941
Jacksonville, Fla.....	Apr. 1, 1941
Milwaukee, Wis.....	Mar. 1, 1942
Mobile, Ala.....	Apr. 1, 1941
Norfolk, Va.....	Do.
Philadelphia, Pa.....	Mar. 1, 1942
Pittsburgh, Pa.....	Do.
Portland, Maine.....	Do.
Portland, Oreg.....	Do.
St. Louis, Mo.....	Do.
San Francisco, Calif.....	Do.
Savannah, Ga.....	Do.
Seattle, Wash.....	Apr. 1, 1941
Washington, D. C.....	Jan. 1, 1941

At the June pricing for the cost-of-living index, the result of the application of rent ceilings was striking. In each of the 6 cities brought under Federal control in June, substantial reductions in the average rental bill of moderate-income families were noted. The largest reductions between March 15 and June 15 occurred in Mobile with a drop of 11.8 percent and in Norfolk with 9.0 percent (pricing is done in these two cities at quarterly intervals only). Between May 15 and June 15, there were decreases in Seattle of 9.4 percent, Birmingham 8.9 percent, Cleveland 7.0 percent, and Detroit 6.3 percent. The average decline, over the quarter, in all the cities surveyed was 0.4 percent.

In July, with the initiation of Federal control in 8 more cities, average rent cost declined 0.7 percent. The sharpest decline, 6.9 percent, occurred in Baltimore. At the August pricing, the average drop was 0.1 percent, and again reductions were greatest in crowded war areas, such as Seattle, where advances in rents had previously been very marked.

Table 5 shows the change in rental costs to moderate-income families in each of the cities covered in the cost-of-living studies.



TABLE 5.—Percent of Change in Rental Costs to Wage Earners and Lower-Salaried Workers in Large Cities

City	Percent of change in rental costs to August 15, 1942, from—				City	Percent of change in rental costs to August 15, 1942, from—			
	Sept. 15, 1939	Dec. 15, 1941	Mar. 15, 1942	May 15, 1942		Sept. 15, 1939	Dec. 15, 1941	Mar. 15, 1942	May 15, 1942
Average: Large cities	+3.1	-0.6	-1.2	-2.1	Memphis	+10.3	+1.5	+0.6	(2)
Atlanta	+2.5	+3	+2	(2)	Milwaukee	+7.6	+3.5	+2.4	(2)
Baltimore	+2.4	-5.9	-7.0	-7.0	Minneapolis	+2.0	+7	+5	+0.3
Birmingham	+8.2	-6.7	-7.7	-8.1	Mobile	+11.3	-11.4	-11.8	(2)
Boston	+4.7	+1.2	+3	-1	New Orleans	+4.2	+1.2	+3	(2)
Buffalo	+7.8	-1	-6	-3.1	New York	+6	(2)	-1	-1
Chicago	+4.0	+3	-1	-3.0	Norfolk	+6.9	-8.2	-9.0	(2)
Cincinnati	+2.3	+7	+3	-1	Philadelphia	+3.8	+1.0	+2	(2)
Cleveland	+4.1	-3.7	-4.2	-5.3	Pittsburgh	+2.4	+5	+4	-1.2
Denver	+2.2	+5	(2)	-1	Portland, Maine	+5.5	+3.1	+1.1	(2)
Detroit	+2.8	-5.8	-7.1	-7.3	Portland, Oreg.	+10.1	+4.4	+2.8	(2)
Houston	+2.2	+1.5	+1.3	+4	Richmond	+1.6	+5	+1	(2)
Indianapolis	+10.1	+9	+3	(2)	St. Louis	+4.4	+1.6	-3	-1.5
Jacksonville	+14.9	+1.6	+7	(2)	San Francisco	+2.6	+8	+5	-5
Kansas City	+5.8	+9	-2	-8	Savannah	+10.5	+1.1	(2)	-1.2
Los Angeles	+2.0	+1.4	+3	+1	Scranton	-1	-2	-3	(2)
Manchester	+6.4	+6	+3	(2)	Seattle	+3.1	-6.6	-10.3	-10.0
					Washington, D. C.	+6	-6	+1	+1

<sup>1</sup> August data not available. Changes computed to June 15, 1942.

<sup>2</sup> May data not available.

<sup>3</sup> No change.

### Fuel, Electricity, and Ice

Costs for this group of goods, which were 5.6 percent higher in December 1941 than in September 1939, were 6.5 percent above costs in the fall of 1939 by mid-June of 1942, and 7.7 percent above that level in August 1942. All items included in this group, except gas and electricity, are controlled under the General Maximum Price Regulation. In spite of this fact, coal and coke prices, which had advanced very sharply since the outbreak of war, were still 16 percent above September 1939 levels in August 1942. Similarly, fuel-oil prices which had risen sharply because of increased transportation costs resulting from the shortage of available tankers, remained well above pre-war levels. On the average, coal and fuel oil prices each increased 15 percent between September 1939 and March 1942; by August 1942, they had increased 15 percent and 35 percent, respectively. Average electricity and gas rates in large cities throughout the country were both lower in August 1942 than before the war.

Table 6 shows these changes in detail.

TABLE 6.—Percent of Change in Cost of Fuel, Electricity, and Ice to Wage Earners and Lower-Salaried Workers in Large Cities

Article	Percent of change in cost to Aug. 15, 1942, from—			
	Sept. 15, 1939	Dec. 15, 1941	Mar. 15, 1942	May 15, 1942
Fuel oil.....	+35.4	+18.1	+18.1	+10.7
Coke.....	+22.3	+4	+1	( <sup>1</sup> )
Bituminous coal.....	+15.5	+5	+2	+1.0
Anthracite coal.....	+14.6	+4	+1	( <sup>1</sup> )
Ice.....	+12.4	+10.7	+5.5	( <sup>2</sup> )
Wood.....	+10.7	+10.7	+6.0	+3.3
Briquets.....	( <sup>1</sup> )	+9.1	( <sup>1</sup> )	+9.1
Kerosene.....	( <sup>2</sup> )	+1.3	+1.3	( <sup>2</sup> )
Gas.....	-1.7	( <sup>1</sup> )	+1	+2
Electricity.....	-2.0	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> No change.<sup>2</sup> Not priced.<sup>3</sup> August data not available; no change to June 15, 1942.<sup>4</sup> August 1942 data not available; change computed to June 15, 1942.

### Cost of Miscellaneous Goods and Services

Cost of the miscellaneous group of goods and services has not advanced so rapidly, during the war period, as the cost of food, clothing, or housefurnishings.

The commodities in the group had risen, on the average, 8.7 percent between August 15, 1939, and December 15, 1941; by March 15, 10.8 percent; and by April 15, 11.2 percent. After controls were established, they rose 0.1 percent to May 15 and rose again 0.1 percent to June 15. By August 15, they were 0.4 percent below the April level. All the commodities included in the miscellaneous group in the cost-of-living index are subject to controls, except newspapers and used automobiles.<sup>4</sup> The changes in costs of the more important articles are shown in table 7.

The services included in the miscellaneous group advanced less rapidly, before controls, than did the miscellaneous articles. The rate of increase, however, varied greatly from city to city, and was rapid in cities in which there was much war activity. On the average, the cost of services had reached a point in December 1941, 4.3 percent above pre-war levels.

This year, however, the rise has been more rapid. By mid-June of 1942, the cost of services had risen to a point 7.7 percent above September 1939, and by August 15, 8.5 percent above.

<sup>4</sup> In accordance with the policy established by the Bureau in January 1942, weights have been decreased or eliminated for those articles which are difficult or impossible to obtain. Weights for gasoline, motor oil, tires and tubes, and used automobiles have been cut substantially and in some cities dropped entirely in the computation of the index.

TABLE 7.—Percent of Change in Cost of Specified Miscellaneous Commodities Included in the Cost-of-Living Index

Article	Percent of change in cost to Aug. 15, 1942, from—			
	Sept. 15, 1939	Dec. 15, 1941	Mar. 15, 1942	May 15, 1942
Automobiles.....	+19.5	+0.6	-6.9	-7.0
Toilet soap.....	+14.5	+7.1	+1.5	+5
Laundry soap.....	+13.5	+4.7	+1.3	+5
Household paper.....	+9.6	+6.3	-.2	(1)
Tooth paste.....	<sup>2</sup> +7.7	<sup>2</sup> +1.2	(3)	(4)
Gasoline.....	+7.0	+1.3	+5	-.2
Cigarettes.....	+6.4	+2	(1)	(1)
Newspapers.....	+6.3	+3.5	+1.2	(1)
Motor oil.....	+2.2	+4	-.2	-.5
Castor oil.....	(1)	(1)	(1)	(1)

<sup>1</sup> No change.<sup>2</sup> Not priced in August 1942; change computed to June 15, 1942.<sup>3</sup> Not priced in August 1942; no change to June 15, 1942.<sup>4</sup> Not priced in May or August 1942; change computed to June 15, 1942.

The cost of some of the services included in this group, such as telephones, streetcar and bus fares, railroad fares, and postage are regulated by some Federal, State, or local authority, not by the Office of Price Administration. Of the remaining services, most of those not classified as professional or personal services were brought under the control of the Office of Price Administration on July 1. Most important among these are laundry services, dry cleaning, and shoe repairs.

Professional services such as those provided by physicians and hospitals, and personal services such as those provided by barbers and beauty parlors, and motion pictures are still not regulated by the Office of Price Administration. These services have risen considerably since March 1942. Beauty services have advanced 3½ percent; medical care, on the average, more than 2 percent; and movies, 2 percent. Table 8 shows these changes in more detail.

TABLE 8.—Percent of Change in Cost of Specified Services Included in the Cost-of-Living Index

Article	Percent of change in cost to Aug. 15, 1942, from—			
	Sept. 15, 1939	Dec. 15, 1941	Mar. 15, 1942	May 15, 1942
Shoe repairs.....	+17.2	+10.9	+1.1	+1.4
Men's haircuts.....	+15.2	+7.6	+5.1	(1)
Movies, adult.....	+14.7	+4.5	+1.9	+1.0
Laundry services.....	+10.8	+2.4	+1.3	+6
Dry cleaning.....	+7.7	+3.0	+5	-.5
Telephone.....	<sup>3</sup> +5.4	(3)	(3)	(4)
Medical care.....	+4.8	+3.2	+2.3	(1)
Streetcar and bus fares.....	+1.3	+6	+6	-.1
Railroad fares.....	-8.7	(4)	(4)	(4)

<sup>1</sup> May data not available.<sup>2</sup> August 1942 data not available; change computed to June 15, 1942.<sup>3</sup> August 1942 data not available; no change to June 15, 1942.<sup>4</sup> Data not available for May or August 1942.<sup>5</sup> No change.



## Total Costs in Different Cities

Largely as a result of varying rates of change in rent and food costs, the average advance in total living costs has been considerably more in some cities than in others. The greatest increases, since the outbreak of war, have taken place in those cities most affected by war activities.

In the 3-year period from August 1939 to August 1942, total living costs increased most in Norfolk, of the 34 cities covered by the Bureau of Labor Statistics cost-of-living studies, and least in Kansas City. Table 9 shows these changes, in the order of their magnitude,<sup>1</sup> over the entire period.

TABLE 9.—Percent of Change in Cost of Goods Purchased by Wage Earners and Lower-Salaried Workers in Large Cities

City	Percent of increase to Aug. 15, 1942, from—			
	Aug. 15, 1939	Dec. 15, 1941	Mar. 15, 1942	May 15, 1942
Average: Large cities.....	19.1	6.2	2.7	1.2
Norfolk.....	<sup>1</sup> 23.0	<sup>1</sup> 4.3	<sup>1</sup> —.2	( <sup>2</sup> )
Savannah.....	22.4	6.7	2.6	.5
Buffalo.....	22.2	6.3	2.2	—1
Portland, Oreg.....	<sup>1</sup> 22.0	<sup>1</sup> 7.4	<sup>1</sup> 2.5	( <sup>2</sup> )
Manchester.....	<sup>1</sup> 21.8	<sup>1</sup> 7.6	<sup>1</sup> 3.0	( <sup>2</sup> )
Jacksonville.....	<sup>1</sup> 21.7	<sup>1</sup> 4.9	<sup>1</sup> 1.6	( <sup>2</sup> )
Indianapolis.....	<sup>1</sup> 21.6	<sup>1</sup> 5.2	<sup>1</sup> 1.7	( <sup>2</sup> )
Seattle.....	21.1	5.9	1.6	.2
Cincinnati.....	20.7	6.4	2.6	1.3
Los Angeles.....	20.6	7.9	4.0	2.6
Baltimore.....	20.5	5.8	1.9	.6
Birmingham.....	20.5	4.2	1.2	( <sup>2</sup> )
San Francisco.....	20.4	7.5	3.4	1.7
Mobile.....	<sup>1</sup> 20.3	<sup>1</sup> 1.9	<sup>1</sup> —2.3	( <sup>2</sup> )
Portland, Maine.....	<sup>1</sup> 20.2	<sup>1</sup> 7.4	<sup>1</sup> 3.4	( <sup>2</sup> )
Memphis.....	<sup>1</sup> 20.0	<sup>1</sup> 5.7	<sup>1</sup> 2.3	( <sup>2</sup> )
St. Louis.....	19.6	6.1	2.2	1.5
Milwaukee.....	<sup>1</sup> 19.3	<sup>1</sup> 5.8	<sup>1</sup> 2.7	( <sup>2</sup> )
Philadelphia.....	19.3	7.3	3.5	1.7
Detroit.....	19.1	4.1	.1	—1.3
Scranton.....	<sup>1</sup> 19.1	<sup>1</sup> 5.5	<sup>1</sup> 2.0	( <sup>2</sup> )
Boston.....	18.7	6.6	3.3	1.7
New Orleans.....	<sup>1</sup> 18.7	<sup>1</sup> 4.2	<sup>1</sup> .6	( <sup>2</sup> )
Pittsburgh.....	18.7	5.4	2.6	.9
Washington, D. C.....	18.6	6.6	3.0	1.9
Chicago.....	18.4	5.7	2.8	.3
Cleveland.....	18.3	4.4	1.1	—4
Richmond.....	<sup>1</sup> 18.2	<sup>1</sup> 5.2	<sup>1</sup> 2.1	( <sup>2</sup> )
Denver.....	18.0	6.3	2.8	.6
Atlanta.....	<sup>1</sup> 17.9	<sup>1</sup> 4.4	<sup>1</sup> 1.4	( <sup>2</sup> )
New York.....	17.4	6.9	3.8	2.6
Houston.....	16.8	5.6	2.0	1.2
Minneapolis.....	16.8	5.1	1.8	.4
Kansas City.....	16.4	5.6	1.7	.6

<sup>1</sup> August 1942 data not available; changes computed to June 15, 1942.

<sup>2</sup> Data not available.

<sup>3</sup> No change.

# *Wage and Hour Statistics*

## EARNINGS IN MIDCONTINENT AIRFRAME PLANTS, JUNE 1942 <sup>1</sup>

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### *Summary*

AVERAGE hourly earnings including overtime and shift premiums of workers in airframe plants in the Mississippi-Missouri valley have risen about 25 percent since July 1941. The average straight-time earnings of first-shift workers in this area in June 1942 were 79.6 cents an hour. This average is only slightly below the level of wages found in southern California plants in December 1941 (82.9 cents) or in east coast establishments in April 1942 (84.1 cents), but substantially less than the average wage paid to Michigan and Buffalo workers in May 1942.

As in the other segments of the industry studied by the Bureau of Labor Statistics, there is considerable variation in the earnings received by the several groups of workers. Average hourly earnings ranged from 67.7 cents for workers at tasks requiring little or no experience to \$1.10 for employees in occupations which normally require a training period of 4 years or more. Substantial differences from plant to plant in the rates paid for a specific job are also revealed by the study.

Most of the airframe plants in this area of the country pay new workers 60 cents an hour, increasing this rate automatically in 5-cent monthly stages until a 75-cent hourly wage is attained. Overtime is uniformly paid for at one and one-half times the regular rate. At the time of the survey, Saturday work was also commonly compensated for at time and a half and Sunday work at double time.

### *Characteristics of the Industry*

No region of the country has been more greatly affected by the war production program than has the great drainage basin of the Missouri and Mississippi Rivers. Huge "black-out" plants <sup>1</sup> have sprung up from the empty plains. Thousands of workers are learning new phrases—stress, tolerance, vernier, camber—the language of production. They are learning the uses of micrometers, of welding torches, of riveting guns, and they are learning to shape and cut the duralumin, the plexiglass, the steel, and other materials of production.

Most of these workers are new to industry; they have been drawn from home, school, farm, and office. The wages paid by airframe companies to these new workers and the relationship of their earnings

<sup>1</sup> I. e., plants without windows.

to the wage level of similar workers in other regions are particulars which the Bureau of Labor Statistics has endeavored to determine in its present study.

The 11 airframe plants covered by this report are in an area (referred to here as the Midcontinent region) the limits of which are Nebraska on the northwest, Texas on the southwest, Ohio on the northeast, and Tennessee on the southeast. It is readily seen that the establishments are widely scattered geographically.

Four of the 11 establishments surveyed have contracts with the International Association of Machinists, an A. F. of L. affiliate. A fifth has entered into an agreement with the United Automobile Workers, affiliated with the C. I. O. The remaining 6 plants have no agreement with any union organization. There is considerable variation also in the product of these establishments. Although all except one of the plants are producing complete aircraft, the product ranges from small trainers to huge bombers. The remaining plant is manufacturing large-unit subassemblies.

The establishments surveyed are all of about the same size, measured by number of employees. All of them are new plants, situated at a considerable distance from both the Atlantic and Pacific coasts. Most of them are branches of or affiliates of parent companies well established in the industry. All have been faced with the necessity of training large numbers of inexperienced workers (including many women, who at present constitute more than 10 percent of the total employment). All of them pay their workers a straight hourly rate, although employees of one establishment participate in the firm's earnings, under a profit-sharing plan. Finally, as will be shown later, the provisions for overtime pay, the shift differentials, and the entrance rates in effect exhibit a considerable degree of uniformity.

### *Recent History of Wage Rates*

The airframe industry in the Midcontinent region is a new industry; no long historical pattern of rates can be established. There is available in the Bureau of Labor Statistics, however, data on gross average hourly earnings of a sufficient number of plants in the area to trace the movement of earnings there since July 1941. At that time, the hourly earnings of airframe workers averaged 69.2 cents, including overtime pay. In each month thereafter, until January 1942, the average rose, as indicated below:

	Rate (cents)
1941	
July.....	69.2
August.....	72.1
September.....	72.9
October.....	74.0
November.....	79.7
December.....	83.2
1942	
January.....	87.0



The level of earnings since January has remained fairly stable, the average in May 1942 standing at 86.7 cents.

Several factors have contributed to the increase of 17.6 cents an hour in the average since July 1941. Of prime importance was the upward adjustment in basic hourly rates since that date made by each of the plants in the area. A second important influence was the adoption by one company of a profit-sharing bonus. Instituted in November 1941, this factor alone was sufficient to raise the regional average in a recent month by 5 cents. The third element contributing to the rise in the average since July 1941 was the increase in weekly hours worked (from 45.0 to 46.9), with a corresponding increase in the number of overtime hours paid for at punitive rates.

The relatively homogeneous structure of the Midcontinent industry is reflected in a comparatively small variation in general plant average hourly earnings. In July 1941, the spread in earnings between the highest- and lowest-paying establishments was 16.0 cents an hour. The amount of the plant-average difference has declined since that time, resting at 12.2 cents in May 1942.<sup>2</sup>

Part of this difference in the plant averages may be charged to variations in the composition of the working force, to differences in the number of overtime hours worked at extra rates of pay, and to the varying proportion of workers on late shifts commanding differential rates. It is apparent, however, that the principal element contributing to the variation in earnings is the difference in basic hourly rates. The average hourly earnings (excluding overtime compensation) of first-shift workers in selected occupations embracing about three-fourths of the employees, varied by 11.4 cents as between the high- and low-paying establishments.

### Scope of Report

The information on which this report is based was obtained by the Bureau of Labor Statistics in the course of a comprehensive study of the aircraft industry. Earlier studies<sup>3</sup> dealt with the wage structure of airframe plants in the southern California, East Coast, and Michigan and Buffalo areas. Subsequent articles will analyze the earnings received by employees of engine and propeller plants and establishments manufacturing aircraft parts.

The wage data used in this report were obtained by trained representatives of the Bureau, who transcribed the necessary information directly from pay rolls and other records. The principal items of information obtained were the average hourly earnings, exclusive of overtime, of first-shift workers in a selected list of occupations. The selected occupations, although including less than half of the numerous jobs found in the industry, account for all of the key operations and the numerically important occupations, and embrace more than three-fourths of the workers. Information for most of the establishments was obtained for one pay-roll period in June; in the remainder, a May pay-roll period was covered.

<sup>2</sup> For the purposes of this comparison, the plant with the profit-sharing bonus has been included.

<sup>3</sup> See *Monthly Labor Review*, issues of March, July, and August 1942.

## Average Hourly Earnings

## FACTORS AFFECTING AVERAGE EARNINGS

The elements determining the gross weekly pay of any worker are his basic hourly rate, the total hours worked, the number of overtime hours paid for at extra rates, and the number of hours worked on late shifts for which a differential is paid. The midcontinent airframe plants exhibit considerable uniformity in the minimum entrance rate paid to inexperienced male adult workers. Eight of the establishments pay new male workers on the "North American" pattern, now generally adopted in all sections of the country except Michigan. This scale provides for an entrance rate of 60 cents, which is increased automatically in 5-cent monthly stages until earnings reach 75 cents. The ninth establishment also pays new workers a minimum of 60 cents, but has no provision for automatic increases. The two remaining establishments start new workers at 55 cents. This rate advances in one plant to 60 cents after 2 months and to 65 cents upon the completion of 6 months' service. In the remaining plant, employees are increased 5 cents for each 60 days' service until a 70-cent rate is attained.

Somewhat more variation is found in the provisions for compensating work performed on extra shifts. The data contained in table 1, which shows the provisions in effect, indicate that workers on the second shift average about 9 percent more and workers on the third shift about 15 percent more than the earnings received by daylight-shift workers in identical occupations.

TABLE 1.—Scale of Wages for Second and Third Shifts, in Midcontinent Airframe Plants

Number of plants	Differential paid for—	
	Second shift	Third shift
3.....	5 cents an hour.....	10 cents an hour.
2.....	do.....	5 cents an hour.
2.....	do.....	8 hours' pay, at second-shift rates, for 6½ hours' work.
1.....	6 cents an hour.....	9 cents an hour.
1.....	7 cents an hour.....	8 hours' pay, at second-shift rates, for 6¾ hours' work.
1.....	8 cents an hour.....	8 hours' pay, at second-shift rates, for 6½ hours' work.
1.....	5 percent of base rate, plus pay for ¾ hour.	5 percent of base rate, plus pay for ¾ hour.

All but one of the establishments in the area pay time and a half for hours in excess of 8 per day or 40 per week. The exception likewise pays time and a half after 40 hours a week, but begins payment of this extra rate after only 7½ hours a day. Eight plants paid time and a half for Saturday work and three others paid at that rate for work done on the sixth consecutive day. Sunday work was paid for at double the regular rates by 4 of the plants and at time and a half by the remaining establishments. One of the latter paid double time for the seventh consecutive day of work.

Wage earners in the area were working an average of 46.9 hours a week in June 1942, and as a consequence, overtime earnings represent a considerable proportion of the total pay. The cumulative effect of

overtime pay and shift differentials on earnings can be seen in the following tabulation which presents the difference between average straight-time hourly earnings and the average gross hourly earnings, including overtime and shift premiums, in each of the 7 plants for which data were available at the time this report was prepared:

	Cents
Company I.....	2.1
Company II.....	5.2
Company III.....	8.4
Company IV.....	11.1
Company V.....	11.3
Company VI.....	12.7
Company VII.....	15.3

It will be seen that, in most of the establishments, extra overtime and shift compensation increased average earnings by substantial amounts. Even in companies I and II, where little overtime was worked, these extra payments were sufficient to raise average hourly earnings by 2.1 and 5.2 cents, respectively. For the region as a whole, it is estimated that the average gross earnings of workers on all three shifts were about 8 cents higher than equivalent first-shift straight-time earnings.

As stated earlier, all midcontinent establishments, except one, pay their workers a straight hourly rate. However, the profit-sharing bonus paid to the workers of one company represents a substantial increment to their earnings and this bonus has been included in the wage data presented in this report.

#### STRAIGHT-TIME EARNINGS IN THE REGION AS A WHOLE

Straight-time hourly earnings of first-shift workers in the midcontinent frame plants averaged 79.6 cents in June 1942. The average earnings in the 10 plants making complete aircraft (one of the establishments, it will be recalled, was producing subassemblies) were 80.3 cents an hour. These averages conceal a very considerable variation in the earnings of individual workers.

Workers in the 10 plants manufacturing complete airframes have been classified on the basis of the length of training and experience normally required to achieve competence at their tasks.<sup>4</sup> As shown by table 2, average hourly earnings ranged from 67.7 cents for workers in occupations normally requiring less than 6 months' training to \$1.10 for workers in occupations for which 4 years' or more experience is necessary. It will be noted that average earnings progress regularly and consistently with each increase in the length of training period. From this it might appear that each class comprises a homogeneous group of employees. Actually, however, considerable variation in earnings exists even among workers with similar skills.

<sup>4</sup> The estimates of necessary training and experience were prepared by a representative group of airframe manufacturers. The demands of the war program, however, have forced employers to assign workers to occupations normally requiring considerable training much sooner than would ordinarily be the case.



TABLE 2.—Average Hourly Earnings of First-Shift Workers in Midcontinent Airframe Industry, by Length of Required Training, June 1942

Length of training required for occupation	Percent of employees in specified training group	Average hourly earnings
Less than 6 months.....	39.5	\$0.677
6 months and under 1 year.....	22.4	.759
1 year and under 2 years.....	25.8	.840
2 years and under 3 years.....	8.3	.883
3 years and under 4 years.....	5.0	.978
4 years and over.....	8.0	1.096
All workers.....	100.0	.803

## AVERAGE HOURLY EARNINGS BY LENGTH OF REQUIRED TRAINING PERIOD, OCCUPATION, GRADE, AND PLANT

Table 3 presents the average hourly earnings of first-shift workers in 10 midcontinent frame plants by length-of-service class, occupation, and plant; the occupational pattern in the remaining plant, a subassembly producer, did not lend itself to combination with the others. In table 3 the occupational and plant averages have been arranged in descending order; the data within any one column do not relate to the same establishment.

Examination of table 3 reveals that earnings of airframe workers are determined largely by the specific job at which they work, rather than by the length of training declared to be a normal requirement. The considerable extent to which earnings of workers in the several length-of-service groups overlap is immediately apparent. Among the group of occupations requiring 4 years' or more training average earnings ranged from 88.0 cents to \$1.298, a spread of more than 40 cents. A similar range in earnings is found in each of the other length-of-training classes: in the 3 to 4 year group, from 83.5 cents to \$1.203; in the 2 to 3 year group, from 76.6 cents to \$1.070; in the 1 to 2 year class, from 72.0 cents to \$1.017; in the 6 months to 1 year group, from 70.0 to 86.5 cents; and in the occupations requiring less than 6 months' training, from 59.3 to 86.8 cents.

Table 3 reveals also the considerable variation in wages paid by the several establishments to workers in identical occupations. The differences in earnings for given occupations between the low- and high-paying establishments are substantial, in some instances running to more than 40 cents, and averaging about 20 cents. However, there is little consistency in the relative position occupied by the rates in any given establishment. A plant with wages above the regional average may pay workers in some of its occupations at levels well below the regional average for those jobs. Conversely, some low-paying establishments may pay a few occupations a relatively high scale of wages. This is exemplified by the occupational rates in one establishment selected at random. The selected plant is one whose average earnings are slightly below the area average. However, in one occupation, its rate was the highest in the region. Among the 19 occupations in which the selected plant and at least 6 other establishments were represented, the rates paid by the selected company had the following rankings: First in one occupation, second in one occupation, third in 2 occupations, fourth in one occupation, fifth in 2 occupations, sixth in 6 occupations, and seventh in 6 occupations.

TABLE 3.—Average Straight-Time Hourly Earnings of First-Shift Workers in Mid-continent Airframe Plants, by Training Period and Occupation, June 1942

[Letters, A, B, and C, indicate occupational grade]

Length of training period and occupation	Percent of total employees studied	Average hourly earnings, all plants	Individual plant averages in descending order of average									
4 years or more												
Tool and die makers, A	0.7	\$1.298	\$1.340	\$1.319	\$1.308	\$1.273	\$1.210	\$1.200	\$1.183			
Pattern makers, wood, A	.1	1.278	1.200	1.050								
Jig builders, assembly, metal, A	.3	1.235	1.425	1.214	1.175	1.123	1.087					
Milling-machine operators, A	.3	1.194	1.214	1.195	1.170							
Inspectors, assembly, final, A	.2	1.117	1.125	1.110	1.100	1.060						
Turret-lathe operators, A	.3	1.099	1.198	1.110	1.033	1.000						
Electricians, maintenance, A	.4	1.088	1.278	1.117	1.088	1.047	1.030	1.000	1.000			
Tool and die makers, B	.5	1.085	1.154	1.135	1.130	1.108	1.095	1.063	1.025	\$0.938		
Engine-lathe operators, A	.3	1.084	1.222	1.150	1.130	1.075	.970					
Form and model builders, wood, A	.1	1.061	1.088	1.050	.938							
Inspectors, machined parts, A	.1	1.060	1.200	1.150	1.100	1.100						
Working supervisors, productive	2.7	1.051	1.297	1.042	1.040	1.025	.932					
Bench machinists, A	.2	1.026	1.117	1.000	1.000							
Carpenters, maintenance, A	.1	1.012	1.135	1.116								
Mechanics, maintenance, A	.2	1.009	1.070	1.065	1.010	1.010	.950					
Sheet-metal workers, bench, A	.7	.948	.963	.903	.850							
Inspectors, machined parts, B	.2	.924	1.133	.997	.980	.867	.767					
Inspectors, templates, tools and dies, C	.1	.884	.950	.917	.854							
Tool and die makers, C	.3	.880	.950	.918	.862	.833						
3 and under 4 years												
Inspectors—												
Receiving, A	.1	1.203	1.307	1.113								
Assembly, general, A	.4	1.057	1.394	1.017	.970	.925						
Detail, A	.1	1.020	1.025									
Jig builders, assembly, metal, B	1.0	1.009	1.132	1.105	.985	.982	.937	.877	.875			
Field and service mechanics, A	.1	.997	1.083	1.014	.950							
Assemblers, general, A	1.0	.982	1.169	1.000	.986	.980	.938	.918	.818			
Inspectors, assembly, final, B	.3	.981	1.040	1.014	.975	.975	.966	.950				
Turret-lathe operators, B	.4	.955	1.010	1.000	.896	.783						
Milling-machine operators, B	.3	.921	1.000	.957	.953	.883						
Engine-lathe operators, B	.3	.908	1.005	.880	.840							
Grinder operators, B	.1	.897	1.000	.997	.835							
Small-tool repairmen, A	.1	.875	.890	.883	.829							
Lay-out men	.2	.858	.950	.857	.850	.823						
Inspectors, machined parts, C	.1	.835	.890	.750								

TABLE 3.—Average Straight-Time Hourly Earnings of First-Shift Workers in Mid-continent Airframe Plants, by Training Period and Occupation, June 1942—Continued

[Letters, A, B, and C, indicate occupational grade]

Length of training period and occupation	Per- cent of total em- ploy- ees stud- ied	Aver- age hourly earn- ings, all plants	Individual plant averages in descending order of average									
2 and under 3 years												
Welders, maintenance and jig, A	0.1	\$1.070	\$1.150	\$1.097	\$1.000							
Template makers, B	.1	1.052	1.071	.883								
Welders, gas (aluminum and steel), A	.7	1.039	1.243	1.127	1.041	\$1.017	\$ .970					
Installers, controls, A	.2	.971	.950	.816								
Inspectors, receiving, B	.1	.915	.921	.900								
Painters, aircraft, A	.4	.915	.930	.921	.917	.900	.867	\$0.842				
Inspectors, assembly, general, B	.3	.890	.894	.891	.879	.838						
Field and service mechanics, B	.1	.887	.940	.896	.831							
Mechanics, maintenance, B	.3	.874	.938	.900	.876	.866	.833					
Bench machinists, B	.4	.872	1.015	.885	.850	.846	.840	.784				
Installers, electrical, A	.2	.867	.917	.836	.808							
Carpenters, maintenance, B	.3	.862	.900	.792								
Electricians, maintenance, B	.4	0.861	0.925	0.911	0.898	0.892	0.892	.700				
Assemblers, electrical and radio, bench, A	.1	.854	.872	.830								
Sheet-metal workers, bench, B	2.7	.845	1.063	.950	.950	.868	.810	.761	\$0.759	\$0.742	\$0.700	
Installers, general, A	.3	.843	.950	.932	.900	.800						
Inspectors—												
Assembly, final, C	.4	.824	.868	.833	.816	.806	.793					
Detail, B	.5	.811	.950	.890	.887	.733						
Form and model builders, wood, C	.1	.766	.775	.730								
1 year and under 2 years												
Welders—												
Arc, B	.2	1.017	1.073	1.052	.830							
Gas (aluminum and steel), B	.9	1.012	1.132	1.050	1.017	1.000	.931	.922	.850			
Maintenance and jig, B	.2	1.012	1.075	1.043	.995	.983	.915					
Drop-hammer operators, B	.1	1.000	1.120	.925	.875							
Riveters, A	.4	.940	1.087	.883	.850	.833	.810					
Assemblers, general, B	6.9	.918	1.032	.892	.876	.859	.849	.815	.802	.776	.769	\$0.720
Power-brake operators, B	.2	.915	1.050	.850	.767	.750						
Assemblers, precision, bench, B	.2	.914	.876	.850								
Drill-press operators, A	.2	.865	.873	.783								
Shaper operators, metal, B	.1	.863	.863	.843								
Assemblers, general, wood, B	.8	.852	1.078	.824	.819							
Painters, aircraft, B	.4	.850	.856	.853	.850	.838	.788	.743	.720			
Coverers, fabric, A	.1	.840	.830	.700								
Tool-crib attendants, A	.3	.837	.960	.923	.750	.700						
Form-book makers, metal and wood, B	.1	.833	.828									
Punch-press operators, B	.3	.829	.830	.802	.745	.742						
Installers, general, B	.9	.824	.861	.850	.817	.816	.800	.800	.792			



TABLE 3.—Average Straight-Time Hourly Earnings of First-Shift Workers in Mid-continent Airframe Plants, by Training Period and Occupation, June 1942—Continued

[Letters, A, B, and C, indicate occupational grade]

Length of training period and occupation	Per- cent of total em- ploy- ees stud- ied	Aver- age hourly earn- ings, all plants	Individual plant averages in descending order of average									
1 year and under 2 years—Continued												
Jig builders, assembly, metal, C.....	01.3	\$0.823	\$0.855	\$0.842	\$0.821	\$0.817	\$0.790	\$0.781				
Mechanics, maintenance, C.....	.2	.822	.925	.783	.778	.776	.761					
Spot welders, B.....	.1	.818	.827	.800	.750							
Installers, electrical, B.....	.6	.817	.971	.906	.862	.824	.823	.739	\$0.717			
Power-shear operators, B.....	.3	.813	.792	.780	.767							
Turret-lathe operators, C.....	.4	.810	.869	.800	.710							
Grinder operators, C.....	.2	.809	.875	.813	.783							
Field and service mechanics, C.....	.1	.807	.925	.825	.817	.750						
Installers, power plant, B.....	.3	.805	.868	.850	.725	.714						
Milling-machine operators, C.....	1.0	.797	.875	.831	.830	.805	.775	.726	.713	\$ .713		
Installers, controls, B.....	.4	.793	.838	.823	.809	.763	.740					
Inspectors, receiving, C.....	.4	.789	.806	.795	.775	.750						
Engine-lathe operators, C.....	.2	.789	.875	.875	.800	.725						
Inspectors—												
Assembly, general, C.....	.4	.786	.806	.800	.779	.775	.750					
Detail, C.....	.2	.781	.806	.788	.779	.765						
Sheet-metal workers, bench, C.....	1.8	.772	.857	.827	.817	.782	.761	.728	.700	.694	\$0.669	
Metal fitters, B.....	.2	.762	.930	.867	.750	.731						
Clerks, stock and stores.....	3.5	.738	.847	.761	.758	.736	.720	.712	.711	.707	.695	
Inspectors, assembly, precision, C.....	.1	.729	.845	.675								
Clerks, shipping and receiving.....	1.0	.720	.767	.763	.746	.730	.728	.688	.680	.670		
6 months and under 1 year												
Welders, arc, C.....	.1	.865	.892	.800								
Router operators, A.....	.2	.838	.802	.770	.750							
Assemblers, precision, bench, C.....	.2	.814	.800	.800								
Drill-press operators, B.....	1.1	.804	1.050	.850	.810	.800	.750	.715				
Saw operators, A.....	.2	.804	.826	.813	.714							
Craters, B.....	.1	.802	.800	.700								
Welders, gas (aluminum and steel), C.....	.6	.800	.960	.903	.815	.791	.740	.713				
Assemblers, electrical and radio, bench, B.....	.7	.789	.956	.838	.814	.783	.754	.700	.700			
Tube benders, bench, B.....	.4	.786	1.000	.827	.783	.725	.710	.700				
Carpenters, maintenance, C.....	.2	.784	.794	.788	.749							
Drop-hammer operators, C.....	.1	.783	.800	.782	.723							

TABLE 3.—Average Straight-Time Hourly Earnings of First-Shift Workers in Mid-continent Airframe Plants, by Training Period and Occupation, June 1942—Continued

[Letters, A, B, and C, indicate occupational grade]

Length of training period and occupation	Per- cent of total em- ploy- ees stud- ied	Average hourly earn- ings, all plants											Individual plant averages in descending order of average											
6 months and under 1 year—Continued																								
Installers, electrical, C	0.5	\$0.762	\$0.882	\$0.795	\$0.775	\$0.750	\$0.681	\$0.650																
Tool-crib attendants, B	.7	.762	.865	.760	.758	.750	.750	.747	\$0.710															
Bench machinists, C	.5	.761	.840	.821	.777	.762	.760	.740	.725	\$0.717	\$0.700													
Assemblers, general, C	6.3	.754	.861	.800	.783	.764	.757	.725	.715	.713	.673	\$0.671												
Riveters, B	5.2	.752	.975	.788	.764	.753	.750	.731	.696															
Installers—																								
General, C	1.4	.751	.783	.775	.759	.758	.700																	
Hydraulic, C	.1	.743	.775	.700																				
Power plant, C	.3	.738	.850	.800	.790	.734	.700	.600																
Painters, aircraft, C	.7	.737	.800	.758	.750	.733	.713	.675																
Form-block makers, metal and wood, C	.2	.736	.800	.750	.750	.717																		
Truckers, power	.3	.735	.773	.756	.700	.700	.672																	
Electricians, mainte- nance, C	.1	.734	.767	.758	.743																			
Metal fitters, C	.1	.728	.793	.700	.683																			
Guards and watchmen	1.4	.725	.759	.742	.733	.730	.704	.700																
Installers, controls, C	.2	.700	.759	.750	.675	.642																		
Under 6 months																								
Saw operators, B	.1	.868	1.003	.733	.667																			
Coverers, fabric, B	.4	.784	.961	.756	.750	.725																		
Tool and die makers, learner	.2	.765	.770	.767	.743																			
Drill-press operators, C	1.3	.737	.750	.721	.663																			
Assemblers, general, wood, C	.5	.732	.750	.716																				
Craters, C	.3	.722	.750	.700	.638	.625																		
Anodizers, B	.1	.720	.742	.671																				
Inspectors, machined parts, learner	.1	.718	.744	.650																				
Punch-press operators, learner	.2	.718	.745	.700																				
Router operators, learner	.1	.709	.750	.680	.640																			
Sheet-metal workers, bench, learner	1.7	.702	.747	.690	.670	.662	.625	.600																
Helpers, general	4.9	.685	.748	.734	.733	.717	.714	.704	.669	.632														
Assemblers, general, learner	4.6	.685	.796	.747	.700	.672	.633	.600	.590															
Laborers	1.4	.684	.773	.750	.723	.710	.703	.654	.600	.600														
Assemblers, electrical and radio, bench, learner	.4	.679	.706	.663	.600																			
Jig builders, assembly, metal, learner	.9	.675	.775	.738	.655	.626																		
Assemblers, general, wood, learner	.4	.672	.771	.683	.646																			
Inspectors, detail, learner	.1	.670	.700	.660	.650																			
Riveters, learner	2.4	.670	.708	.698	.696	.669	.624	.600																
Installers, general, learner	2.5	.667	.690	.674	.606																			

TABLE 3.—Average Straight-Time Hourly Earnings of First-Shift Workers in Midcontinent Airframe Plants, by Training Period and Occupation, June 1942—Continued

[Letters, A, B, and C, indicate occupational grade]

Length of training period and occupation	Per- cent of total em- ploy- ees stud- ied	Aver- age hourly earn- ings, all plants	Individual plant averages in descending order of average									
<i>Under 6 months—Con.</i>												
Tube benders, bench, learner	0.3	\$0.665	\$0.743	\$0.641								
Assemblers, precision, bench, learner	.3	.664	.747	.648								
Field and service mechanics, learner	.1	.664	.735	.638								
Janitors	2.1	.662	.784	.722	\$0.722	\$0.686	\$0.681	\$0.610	\$0.600	\$0.600	\$0.574	\$0.565
Painters, aircraft, learner	.3	.661	.746	.683	.636	.600	.550					
Installers, electrical, learner	.5	.659	.702	.659	.615							
Pattern makers, plaster, learner	.2	.659	.767	.694	.675	.600						
Inspectors—												
Assembly, general, learner	.3	.656	.680	.655	.650	.633						
Receiving, learner	.2	.655	.700	.650	.650	.645						
Installers—												
Power plant, learner	.3	.646	.750	.650	.649	.625						
Controls, learner	.2	.644	.649	.583								
Hydraulic, learner	.2	.643	.646	.635								
Craters, learner	.3	.641	.679	.679	.550							
Tool-crib attendance, learner	.2	.637	.660	.653	.600							
Truckers, hand, and warehousemen	.1	.625	.625									
Heat treaters (aluminum alloy and steel), learner	.2	.620	.640	.617	.583							
Milling-machine operators, learner	.1	.616	.633	.633								
Form-block makers, metal and wood, learner	.5	.604	.650	.603								
Bench machinists, learner	.1	.603	.600	.600								

## COMPARISON OF AVERAGE HOURLY EARNINGS BY REGION

Average hourly earnings in the Midcontinent region in June 1942 were only slightly below the wage level prevailing in southern California in December 1941, and along the east coast in April 1942. They were, however, substantially below the level of earnings in the Michigan and Buffalo areas in May. The respective averages were as follows: Midcontinent, 79.6 cents; southern California, 82.9 cents; East Coast, 84.1 cents; Buffalo, 98.2 cents; and Michigan, \$1.093. The average in southern California is believed to have advanced to approximately 84 cents by May 1942, leaving the Midcontinent region about 3½ cents below the California average.

Table 4 presents a comparison of average hourly earnings of workers grouped according to the indicated necessary length of training for



each of 4 regions. A similar tabulation for the Michigan workers cannot be presented because the converted automobile plants have not adopted the grade classification within an occupation which is typical of the remainder of the industry. It will be seen that almost without exception the midcontinent average for a specific length-of-training group is lower than the average for comparable workers in the other areas. Of equal importance, however, is the large proportion of midcontinent workers found in less-skilled categories. This, of course, is a reflection of the newness of the industry in the area. It is still expanding at a rapid rate, and many of the workers have not yet achieved the skill necessary for assignment to more complex tasks. Class for class, it may be seen that earnings of midcontinent workers were nearly on a par with, and in fact were higher in one class than, the wages of east-coast workers. Most of the 4-cent difference between the midcontinent and east-coast averages can therefore be attributed to the larger proportion of new workers in the midcontinent plants. A similarity in this respect with the California data may be noted. Information for the California workers was obtained at a time when employees were being added in large numbers. In contrast, the smaller proportions of less-skilled workers in the Buffalo and East Coast areas mirror a lower accession rate in these regions at the time of the study.

TABLE 4.—*Straight-Time Average Hourly Earnings of First-Shift Workers in Airframe Industry, by Length of Required Training and Area*

Length of training required for occupation	Midcontinent, June 1942		Buffalo, May 1942		East Coast, April 1942		California, December 1941	
	Per-cent of em- ployees	Aver- age hourly earn- ings	Per-cent of em- ployees	Aver- age hourly earn- ings	Per-cent of em- ployees	Aver- age hourly earn- ings	Per-cent of em- ployees	Aver- age hourly earn- ings
Less than 6 months.....	30.5	\$0.677	7.2	\$0.826	19.1	\$0.681	34.0	\$0.702
6 months and under 1 year.....	22.4	.759	32.1	.940	25.5	.772	24.7	.771
1 year and under 2 years.....	25.8	.840	29.7	.965	26.8	.849	19.3	.827
2 and under 3 years.....	8.3	.883	11.3	1.020	8.4	.927	5.4	.987
3 and under 4 years.....	5.0	.978	8.3	1.061	8.3	.973	5.4	.970
4 years and over.....	8.0	1.096	11.4	1.153	11.9	1.075	11.2	1.128
All workers.....	100.0	.803	100.0	.982	100.0	.841	100.0	.829

Table 5 shows the average earnings for specific occupations in the four regions. As would naturally follow from the similarity in the general regional averages, the earnings received by midcontinent workers parallel closely those paid to workers in the same occupations in the California and East Coast areas. For most occupations, however, the midcontinent averages are considerably below the wages paid to the workers in Buffalo.

TABLE 5.—*Straight-Time Average Hourly Earnings of First-Shift Employees in Selected Occupations in Airframe Industry, by Occupation and Region*

Occupation	Midcon- tinent, June 1942	Buffalo, May 1942	East Coast, April 1942	California, December 1941
Assemblers, general, grade A	\$0.982	\$1.115	\$0.995	\$0.992
Assemblers, general, grade B	.918	1.025	.884	.845
Assemblers, general, grade C	.754	.969	.755	.770
Assemblers, general, learner	.685	.654	.663	.711
Assemblers, precision, bench, grade B	.914	.913	.916	.890
Assemblers, precision, bench, grade C	.814	.891	.757	.808
Bench machinists, grade C	.761	.875	.762	.775
Carpenters, maintenance, grade A	1.012	1.112	1.010	1.059
Clerks, shipping and receiving	.720	.925	.783	.732
Clerks, stock and stores	.738	.839	.758	.765
Drill-press operators, grade A	.865	1.039	.887	.761
Drill-press operators, grade B	.804	.972	.828	.818
Drill-press operators, grade C	.737	.935	.706	.698
Electricians, maintenance, grade A	1.088	1.109	1.063	1.169
Field and service mechanics, grade B	.887	.918	.969	.969
Guards and watchmen	.725	.828	.746	.764
Helpers, general	.685	.915	.717	.698
Inspectors, assembly, general, grade A	1.057	1.034	1.010	1.039
Inspectors, assembly, general, grade B	.890	.880	.916	.939
Inspectors, assembly, general, grade C	.786	.905	.814	.835
Installers, general, grade A	.843	1.155	.948	.966
Installers, general, grade B	.824	.939	.847	.834
Installers, general, grade C	.751	.855	.742	.759
Installers, power plant, grade B	.805	.967	.859	.861
Janitors	.662	.796	.729	.734
Jig builders, assembly, metal, grade A	1.235	1.163	1.123	1.103
Jig builders, assembly, metal, grade B	1.009	1.024	.897	.950
Laborers	.684	.849	.727	.713
Lay-out men	.858	1.013	.926	.747
Mechanics, maintenance, grade B	.874	.928	.928	.951
Metal fitters, grade C	.728	.899	.769	.836
Milling-machine operators, grade A	1.194	1.073	1.135	1.133
Milling-machine operators, grade C	.797	.943	.830	.792
Painters, aircraft, grade A	.915	1.196	.865	.972
Painters, aircraft, grade B	.850	1.034	.815	.783
Painters, aircraft, grade C	.737	.932	.767	.771
Pattern makers, wood, grade A	1.278	1.206	1.188	1.352
Punch-press operators, grade B	.829	1.011	.802	.817
Riveters, grade A	.940	1.014	.904	.841
Riveters, grade B	.752	.923	.789	.772
Saw operators, grade B	.868	.804	.792	.810
Sheet-metal workers, bench, grade A	.948	1.144	1.039	1.047
Sheet-metal workers, bench, grade B	.845	1.025	.903	.904
Sheet-metal workers, bench, grade C	.772	.924	.794	.806
Spot welders, grade B	.818	.946	.809	.833
Tool and die makers, grade A	1.298	1.304	1.252	1.281
Tool and die makers, grade B	1.085	1.049	1.087	1.042
Tool and die makers, grade C	.880	.883	.940	.918
Tool-crib attendants, grade A	.837	.938	.841	.862
Tool-crib attendants, grade B	.762	.830	.772	.699
Tube benders, bench, grade B	.786	.891	.859	.785
Welders, gas (aluminum and steel), grade A	1.039	1.164	1.093	1.262
Welders, gas (aluminum and steel), grade B	1.012	.929	.891	1.012
Working supervisors	1.051	1.242	1.081	1.119

# EARNINGS AND HOURS IN BOOK AND JOB PRINTING, JANUARY 1942 <sup>1</sup>

## PART 1.—HOURLY EARNINGS

### Summary

STRAIGHT-TIME hourly earnings in the printing industry, exclusive of large newspapers, averaged 78.3 cents in January 1942. Male employees earned an average of 87.0 cents, while woman workers, who constitute about one-fourth of the labor force, averaged 48.8 cents. This information is based on a mail questionnaire study by the Bureau of Labor Statistics covering almost 4,000 firms in the various branches of the printing industry.

The heterogeneous character of the industry's labor force is indicated by the extreme variation in earnings, from less than 30 cents to over \$2 an hour. Slightly more than one-tenth of the workers earned less than 40 cents an hour, while roughly one-third had average earnings of \$1 or more an hour. Only 7.0 percent of the males but more than one-fifth (22.6 percent) of the woman workers averaged less than 40 cents.

Earnings were highest in the gravure branch of the industry; the small group of skilled workers in this branch averaged \$1.24 per hour. The bookbinding branch, which employed numerous women, paid the lowest wages, averaging 61.5 cents per hour. The averages in other branches, studied separately, were as follows: General commercial printing, 78.4 cents; periodicals, 86.2 cents; books, 81.8 cents; small newspapers, 66.6 cents; and lithography, 77.2 cents.

Examined from a regional point of view, wages were highest on the Pacific coast. Workers in large cities enjoyed a substantial wage advantage over those in the smaller towns, and workers in large plants received higher wages than those in small shops.

### Characteristics of the Industry

The reproduction of words, pictures, figures, and symbols on paper by the printing processes is one of the great industries of the United States, in time of war as well as in time of peace. In 1939, according to the Census of Manufactures, printing, publishing, and allied industries operated nearly 25,000 separate establishments and employed about one-third of a million workers.

Wartime necessities have affected the printing industries, particularly those largely dependent upon advertising. Increases in Government printing work have failed to compensate for the loss of private business. In May 1942 the Public Printer prophesied that by the end of the current calendar year Government contracts totaling approximately \$10,000,000 will have been let to private commercial printers. However, he pointed out that this amount, in addition to all printing done by the Government Printing Office itself, would represent only about 2 percent of the total printing done by commercial printers in the United States.

<sup>1</sup> Prepared by Everette B. Harris, with the assistance of Woodrow C. Linn. The study was conducted in the Bureau's Division of Wage Analysis under the supervision of Victor S. Baril. Part 2, which will appear in a later issue of the Monthly Labor Review, will present hourly earnings by occupations, as well as information on weekly hours of work and weekly earnings.



## PRINTING PROCESSES

The various forms of commercial printing involve a great variety of operations, many of which fall into two broad classes: operations essential to the preparation of a patterned surface, such as a type face, suitable for making the desired impressions; and those operations involved in the repetitive reproduction of the pattern of words or symbols on paper or other media. There are, of course, other important operations, such as proofreading and bookbinding. All of these are normally performed by specialized types of workers whose wages are determined more or less independently.

The preparation of the printing surface has most commonly involved the setting of type by hand or by machine, although engraving, photoengraving, and other methods are also widely used. Each recent decade has brought forth important technological developments in this field, all of which have influenced the position of the worker. Wider use of the typesetter, by which a central operator can set up type in distant cities, is anticipated for the future. Recent inventions, which make practical application of the photoelectric cell, are the Howey engraving machine and the Semagraph; the latter operates a linotype or Intertype machine from typewritten copy.

Actual reproduction processes are of three major types. In order of importance these are letterpress, lithography (offset), and gravure.

The letterpress method, often called "relief" printing, is the oldest and most widely used method in this country. In this process raised type is used and the ink is applied to the type surface for transfer to the paper. Letterpress printing may be accomplished on a platen press, where the impressions are made by flat, even pressure against a flat type area; on a cylinder press, where a cylinder carrying the paper rolls across a type area consisting of a stereotyped or electrotyped plate; or on a web-rotary press, used by most newspapers, by which continuous rolls of paper are run over curved stereotyped plates.

Lithography, a somewhat newer form of printing, has developed rapidly during recent years. Under this process the printing surface is a smooth metal plate (usually zinc or aluminum), chemically treated in such a manner that ink adheres only to the appropriate outlines or areas. The most popular lithographic equipment now in use is the "offset" press which makes use of three principal rollers; one of these carries the press plate, the second is covered by a rubber blanket which transfers or offsets the printing to the paper, and the third carries the paper.

In gravure printing, the parts of the plate by which the impression is transmitted are recessed; they are filled with ink for each impression, while the remaining surfaces are kept free of ink by a "doctor" blade or other special equipment. While gravure accounts for a relatively small proportion of all printing, it is tending to come into wider usage as suitable paper and less expensive presses become available.

A very marked trend away from the "general" or "all-round" printer and print shop has been in evidence during recent years. Many shops formerly equipped to complete all phases of production now find it advantageous to send out their composition, binding, photoengraving, camera work, offset-plate making, stereotyping, electrotyping, mounting and finishing, or other work. Also there has been a trend toward specialization of product. Many printers

now concentrate on a particular line such as labels, advertising pieces, continuous business forms, manifold forms, folders, menus, tickets, etc.

### BRANCHES OF THE INDUSTRY

Of the various printing industries distinguished by the Census of Manufactures, the newspaper branch is largest by most measures (table 1). Establishments engaged in newspaper publishing and printing numbered 6,878 in 1939, employed nearly 100,000 wage earners, and reported \$671,000,000 in value added by manufacture. General commercial (job) printing establishments numbered nearly 10,000 and employed almost 100,000 workers, but reported only \$324,000,000 in value added by manufacture. Lithography, periodicals, and books were the other leading branches. As is pointed out below, the study reported in this article excluded large newspapers and certain other branches reported by the Census, but included representation of letter shops, which the Census of Manufactures does not classify as printing establishments.

TABLE 1.—*Number of Establishments, Average Number of Wage Earners, Wages, Value of Products, and Value Added by Manufacture in Printing, Publishing, and Allied Industries, 1939*<sup>1</sup>

Branch of industry	Number of establishments	Wage earners (average for year)	Wages	Value of product	Value added by manufacture
All branches.....	24, 878	324, 535	\$493, 615, 659	\$2, 578, 464, 382	\$1, 766, 456, 764
General commercial (job) printing.....	9, 595	96, 039	132, 944, 964	515, 435, 609	323, 701, 972
Lithography and photolithography.....	749	26, 000	37, 929, 201	154, 394, 787	96, 708, 353
Books:					
Publishing without printing.....	556	135	195, 673	109, 579, 003	74, 030, 729
Publishing and printing.....	150	6, 091	8, 404, 779	39, 517, 202	27, 788, 509
Printing without publishing.....	690	16, 547	25, 037, 639	87, 656, 088	55, 644, 083
Periodicals:					
Publishing without printing.....	1, 958	436	550, 099	266, 831, 618	150, 167, 491
Publishing and printing.....	600	20, 985	33, 002, 502	202, 015, 136	144, 382, 328
Bookbinding and related work.....	1, 133	25, 690	29, 062, 627	102, 591, 313	72, 162, 598
Newspapers:					
Publishing without printing.....	431	260	363, 445	11, 963, 611	6, 648, 981
Publishing and printing.....	6, 878	96, 991	164, 355, 044	898, 225, 000	671, 047, 669
Gravure, rotogravure, and rotary photo-gravure.....	24	2, 623	5, 436, 278	18, 614, 837	11, 371, 501
Photoengraving.....	694	9, 207	22, 568, 156	55, 619, 445	48, 257, 775
Greeting cards (except hand painted).....	109	7, 522	7, 264, 165	39, 715, 439	24, 225, 293
Machine and hand typesetting.....	641	6, 244	10, 424, 914	25, 096, 497	22, 044, 421
Engraving (steel, copperplate, and wood)...	436	5, 353	7, 156, 404	22, 163, 638	16, 134, 287
Electrotyping and stereotyping.....	234	4, 412	8, 919, 769	29, 045, 159	22, 140, 774

<sup>1</sup> Data are from Census of Manufactures.

### LOCATION AND SIZE OF PLANTS

The printing industries are scattered throughout the United States, with a decided concentration, as would be expected, in the most populous States. The concentration is particularly pronounced in general commercial (job) printing, in which New York ranks first in number of establishments (1,823 in 1939), Illinois second (857), California third (789), and Pennsylvania fourth (705). New York also leads in number of firms in the books, lithography, and book-binding branches. The printing and publishing of newspapers is more widely distributed geographically than are most of the other branches.

Certain processes requiring great skill or expensive equipment, such as gravure, engraving, multicolor work, and the printing and publishing of books, have tended to concentrate in a few large cities. New York, Chicago, and Philadelphia are the most important of the great printing centers, but substantial concentrations are found in other metropolitan areas. A movement toward decentralization, apparent in recent years, has been felt particularly in the New York area. This movement has been prompted largely by the desire to obtain lower-priced labor and has been facilitated by technological developments within the industry.

Despite a trend toward concentration in the hands of the larger producers, the printing industry is still composed mainly of relatively small industrial units. Of the 25,000 establishments reported by the Census of Manufactures in 1939, only 1 had more than 2,500 wage earners, only 9 had more than 1,000 wage earners, and only 520 (2 percent) employed more than 100 workers. Almost nine-tenths of all establishments employed an average of 20 employees or less.

#### CHARACTERISTICS OF THE LABOR FORCE

Printing-trades workers are predominantly skilled white males. Fewer than 2 percent of the workers included in the Bureau's study were Negroes. Woman workers were found to constitute one-fourth of the labor force of the total industry but were employed primarily in the lower-skilled occupations. The proportion of woman workers varied among the various branches of the industry, ranging from 2.2 percent in the gravure branch to 73.6 percent of the letter-shop employees. Women comprise slightly more than one-fifth (20.7 percent) of the workers in commercial printing and almost one-half (46.1 percent) of the bookbinding employees.

Job requirements in the printing trades are unusually high, often requiring a combination of a good educational background, sound judgment, and physical strength and skill. Journeyman workers in many occupations must have several years of experience, and formal apprenticeships are in common use. Proofreaders, machinists, and engravers rank near the top in skill requirements. Among the most numerous of the skilled workers are the compositors, who set up type by hand or machine, and the pressmen.

Working conditions are relatively favorable. Most branches show but minor seasonal fluctuations in employment. Few manufacturing workers have greater job security than the printers.

No attempt was made in the present study to determine the extent of unionization in the industry. It is well known, however, that organized labor has long had a profound influence on the printing industry. It is estimated that over one-third of the total number of workers are covered by collective agreements, although union organization is confined mainly to production workers. Most of the many individual unions in the industry are affiliated with the A. F. of L. The local unions enjoy a high degree of autonomy; as a result there is a wide variance in wage scales and shop rules from city to city.

Although the questionnaire used in the Bureau's survey carried no inquiry regarding method of wage payment, printing is known to be predominantly a time-rate industry.



### *Purpose and Scope of Survey*

This survey of wages and hours of work in the book and job printing and related industries was undertaken by the Bureau of Labor Statistics as part of its established program for securing basic information on the wage structure of American industries. In addition, the survey was requested by the Wage and Hour Division of the U. S. Department of Labor, for use by an industry committee appointed by the Administrator to consider the appropriate legal minimum wage scale for the industry group. This is the first comprehensive study of wages and hours in the printing industry to be made by the Bureau. Information regarding union wage rates in certain occupations, however, has been published annually by the Bureau for many years.

The Bureau's survey was primarily concerned with seven branches of the printing industry, namely, commercial printing, lithography, books, periodicals, bookbinding, small newspapers, and gravure. There is, of course, much overlapping among these branches. Establishments engaged in more than one of the specified types of operation were classified on the basis of major product.

The *commercial printing* branch includes establishments primarily engaged in commercial or job printing (letterpress printing). This branch also includes firms printing newspapers for others. In the Bureau's study, firms printing periodicals for others were classified in the periodicals branch, whereas the Census of Manufactures classifies them in the general commercial (job) printing industry.

For purposes of the present survey, the *lithography* branch includes all firms primarily engaged in lithographing or offset printing, whereas the Census of Manufactures groups the lithographing of books, pamphlets, and greeting cards in other industries.

In the *books* branch, the Bureau's definition differs from that of the Census in that only those establishments engaged primarily in printing without publishing or in both the printing and publishing of books are included; firms doing publishing alone are not considered within the scope of the present survey. Also the Bureau's classification includes only those firms printing books by the letterpress method, all work by the lithograph or gravure processes being classified in those respective branches.

In the *periodicals* branch, also, those firms doing publishing only are excluded from the Bureau's survey and firms printing periodicals for others are included in this branch rather than under commercial printing.

The Bureau's definition of *bookbinding* does not differ from that of the Census. Included in this branch are firms primarily engaged in the binding of books and pamphlets (chiefly on a contract or custom basis), in the manufacture of blank books, loose-leaf and similar devices, and in related work such as paper ruling and cutting. Binderries operated in conjunction with printing establishments are not included in this branch but are considered as departments of the printing firms.

Newspapers, as such, were not included in the survey. However, those newspaper plants which undertake a sufficient volume of job printing to be a factor in the commercial field were covered. Specifically, the survey included newspaper establishments which obtained 20 percent or more of their 1941 total dollar receipts from commercial

printing.<sup>2</sup> In the following discussion such establishments are referred to as *small newspapers*.

The *gravure* branch, as set up by the Bureau, covers firms primarily engaged in gravure, rotogravure, and rotary photogravure printing, but does not include establishments concerned solely with the preparation of plates.

In addition to the above, the Bureau's survey included a number of private printing plants operated incidentally in connection with other industries. Since the list of such plants was incomplete, however, and the returns were not entirely satisfactory, data regarding these operations are excluded from the main body of this report.<sup>3</sup> Private printing plants are not considered a division of the general industry group by the Census of Manufactures, as the printing carried on by these establishments is of secondary importance. The Census of Manufactures collects no data for multigraphing, mimeographing, and addressing done by establishments engaged wholly or chiefly in this class of work. At the specific request of the Wage and Hour Division, however, the Bureau has included representation of such establishments, which are presented elsewhere as the "letter shop" branch.<sup>3</sup>

Service industries for the printing trade, consisting of establishments doing machine and hand typesetting, photoengraving, electrotyping, stereotyping, plate making, etc., were excluded from the Bureau's survey.

#### QUESTIONNAIRE RETURNS

The basic data for the present survey were obtained largely by means of mail questionnaires, which were sent to a representative sample of establishments in the various branches of the industry. An exception was made in the case of the larger firms (those employing 500 or more workers) which were visited by the Bureau's trained field representatives. The questionnaires called for information regarding the color, sex, occupation, shift, hours, and earnings of each wage earner during a representative pay-roll period ending about January 15, 1942.

The sample of plants from which information was sought included approximately 25 percent of all plants in the covered segments of the industry. Great care was taken to give appropriate representation to each branch of the industry, and to the various geographic localities and sizes of plants. Of the 9,805 companies from which information was requested, 6,791 (69 percent) made returns. Many of these firms, however, proved to employ no wage earners, to be out of business, or (in a few instances) to be improperly classified in the printing industry. The number of usable returns was 3,816 (table 2).

An analysis of the returns received revealed a slight overrepresentation of the largest plants; particularly those with 500 or more wage earners, which had been visited by the Bureau's representatives. The weight of these plants (500 or over) was consequently reduced by including in the final tabulations only an appropriate random sample of the workers from such plants. The representation by branch of the industry and by geographic area is believed to be reasonably dependable.

<sup>2</sup> A number of large-city newspapers which met this qualification were excluded from the survey, nevertheless.

Information regarding these branches is available in mimeographed form and may be obtained from the Bureau upon request.

TABLE 2.—*Number of Establishments and of Wage Earners Included in Survey of Printing Industry, by Branch of Industry, 1942*

Branch of industry	Number of establishments	Number of workers		
		Total	Male	Female
All branches.....	3,816	55,626	41,842	13,784
All branches, exclusive of letter shops and private printing plants.....	3,419	51,569	39,363	12,206
Commercial printing.....	2,227	22,314	17,699	4,615
Lithography.....	136	7,838	5,847	1,991
Books.....	99	7,465	5,420	2,045
Periodicals.....	98	6,895	5,421	1,474
Bookbinding.....	211	3,921	2,112	1,809
Small newspapers.....	643	2,626	2,365	261
Gravure.....	5	510	490	11
Letter shops.....	201	1,377	363	1,014
Private printing plants.....	196	2,680	2,116	564

## Hourly Earnings

## WAGE TRENDS

A brief review of the trend of wages in the printing industry reveals that when the Bureau's survey was made printing-industry wages were near to their highest recorded level.

TABLE 3.—*Trend of Average Hourly Earnings in Specified Branches of the Printing Industry, 1935-42<sup>1</sup>*

Month	1935	1936	1937	1938	1939	1940	1941	1942
Book and job printing								
January.....	\$0.733	\$0.743	\$0.758	\$0.793	\$0.799	\$0.817	\$0.810	\$0.849
February.....	.728	.740	.752	.785	.802	.804	.810	.843
March.....	.731	.750	.757	.803	.811	.817	.817	.857
April.....	.740	.750	.762	.799	.805	.816	.814	.860
May.....	.742	.748	.779	.799	.802	.821	.819	.866
June.....	.752	.742	.778	.806	.809	.820	.826	.869
July.....	.741	.731	.781	.800	.802	.805	.819	.866
August.....	.730	.726	.770	.793	.797	.799	.816	.....
September.....	.732	.747	.779	.800	.805	.805	.829	.....
October.....	.732	.743	.785	.799	.801	.807	.827	.....
November.....	.736	.745	.785	.798	.806	.812	.838	.....
December.....	.746	.742	.787	.798	.809	.813	.846	.....
Newspapers and periodicals								
January.....	\$0.875	\$0.903	\$0.927	\$0.981	\$0.995	\$1.018	\$1.052	\$1.086
February.....	.877	.903	.931	.977	.996	1.018	1.057	1.089
March.....	.884	.908	.942	.978	.994	1.023	1.055	1.103
April.....	.884	.912	.953	.983	.998	1.029	1.057	1.108
May.....	.885	.918	.968	.994	1.001	1.035	1.066	1.116
June.....	.894	.923	.971	.994	.999	1.036	1.069	1.125
July.....	.892	.920	.966	.978	1.001	1.033	1.068	1.128
August.....	.898	.921	.960	.971	.998	1.031	1.070	.....
September.....	.900	.932	.965	.988	1.007	1.029	1.076	.....
October.....	.902	.935	.985	.991	1.013	1.026	1.081	.....
November.....	.905	.934	.971	.998	1.016	1.049	1.084	.....
December.....	.918	.949	.991	1.007	1.027	1.059	1.107	.....

<sup>1</sup> Based on monthly reports to the Bureau of Labor Statistics. Figures include extra payments for overtime work.

The data presented in table 3, based on monthly reports by a large number of establishments in the major branches of the industry, are not directly comparable with the wage information obtained as a result



of the Bureau's special study,<sup>4</sup> but are believed to present a dependable picture of recent wage movements. These data indicate that wages have risen slowly but steadily since 1935, both in book and job and in newspaper and periodical printing. In contrast to the wage trends in most industries, however, the upward movement was not greatly accelerated following the outbreak of the war in 1939. Average hourly earnings were only slightly higher in July 1942 than in January 1942, the period represented by the Bureau's study.

#### HOURLY EARNINGS IN THE INDUSTRY AS A WHOLE

Average hourly earnings, exclusive of extra payments for overtime, in all branches of the printing industry combined, amounted to 78.3 cents in January 1942 (table 4). The extreme variation in hourly earnings, from less than 30 cents to over \$2, reflects the heterogeneous character of the industry's wage structure. No 5-cent wage interval embraced as many as 10 percent of the workers; the largest number of workers in any interval (7.9 percent) earned from 50 to 55 cents per hour. Only 10.7 percent of the workers earned less than 40 cents an hour, and only 5.0 percent earned less than 35 cents. Somewhat more than half (59.3 percent) of the workers earned 40 cents but less than \$1 per hour. (See chart 1.)

TABLE 4.—Percentage Distribution of Wage Earners in Specified Branches of the Printing Industry, by Average Hourly Earnings, 1942

Average hourly earnings	All branches	Commercial printing	Lithography	Books	Periodicals	Book-binding	Small newspapers	Gravure
Under 30.0 cents.....	0.7	0.7	0.1	0.1	0.1	0.3	6.1	0.4
Exactly 30.0 cents.....	2.5	2.9	1.7	1.4	2.3	3.7	4.2	.....
30.1 and under 32.5 cents.....	.5	.5	.7	.2	.4	.4	1.2	.....
32.5 and under 35.0 cents.....	1.3	1.3	1.1	1.6	.7	2.3	1.9	.....
35.0 and under 37.5 cents.....	3.1	3.0	3.5	2.3	3.3	4.6	2.9	.4
37.5 and under 40.0 cents.....	2.6	2.4	2.4	4.1	1.6	2.7	2.8	.....
Exactly 40.0 cents.....	5.1	4.7	5.3	5.1	3.3	13.1	2.5	.2
40.1 and under 45.0 cents.....	4.0	3.4	4.8	5.1	3.4	5.0	4.0	.2
45.0 and under 50.0 cents.....	7.2	6.4	9.6	6.7	7.1	10.3	5.2	2.5
50.0 and under 55.0 cents.....	7.9	7.3	8.3	7.6	6.4	11.0	8.6	4.9
55.0 and under 60.0 cents.....	5.8	4.7	5.3	7.2	6.1	8.9	7.0	3.3
60.0 and under 65.0 cents.....	5.7	5.6	5.1	5.6	4.8	7.1	8.4	3.7
65.0 and under 70.0 cents.....	4.2	4.2	5.1	3.8	3.1	4.4	4.8	2.5
70.0 and under 75.0 cents.....	3.3	3.5	2.9	3.1	3.3	2.6	4.3	7.1
75.0 and under 80.0 cents.....	4.1	4.6	4.2	3.5	3.2	2.8	6.5	1.8
80.0 and under 85.0 cents.....	3.5	4.3	3.5	2.3	2.5	2.6	3.7	5.7
85.0 and under 90.0 cents.....	3.2	3.6	3.8	2.1	2.8	1.6	3.3	9.9
90.0 and under 95.0 cents.....	3.0	3.7	3.2	2.3	2.7	1.5	2.2	1.8
95.0 and under 100.0 cents.....	2.3	2.5	2.2	2.2	2.8	1.1	1.9	1.8
100.0 and under 105.0 cents.....	3.9	4.7	3.2	3.3	3.9	2.2	3.7	1.6
105.0 and under 110.0 cents.....	3.1	3.4	2.2	3.2	4.3	1.4	3.2	.4
110.0 and under 115.0 cents.....	3.7	4.0	3.0	3.7	5.1	2.2	1.9	4.1
115.0 and under 120.0 cents.....	2.7	3.1	2.1	2.4	3.8	1.4	1.9	1.6
120.0 and under 125.0 cents.....	3.1	2.9	2.5	4.0	4.6	2.1	2.1	5.1
125.0 and under 130.0 cents.....	2.7	2.9	2.5	2.2	4.0	1.5	1.6	.4
130.0 and under 140.0 cents.....	3.3	3.2	3.8	3.4	4.6	2.0	1.7	2.2
140.0 and under 150.0 cents.....	3.1	3.0	2.8	5.0	4.1	.7	.6	4.1
150.0 and under 160.0 cents.....	1.9	1.9	1.9	2.9	2.1	.3	.8	2.4
160.0 and under 170.0 cents.....	.9	.8	1.1	1.5	1.0	.2	.6	2.4
170.0 and under 180.0 cents.....	.7	.4	.9	1.2	1.0	(1)	.3	8.8
180.0 and under 190.0 cents.....	.3	.2	.5	.4	.5	(1)	.....	2.0
190.0 and under 200.0 cents.....	.1	(1)	.2	.2	.3	.....	.....	2.7
200.0 cents and over.....	.5	.2	.5	.3	.8	(1)	.1	16.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of plants.....	3,419	2,227	136	99	98	211	643	5
Number of workers.....	51,569	22,314	7,838	7,465	6,895	3,921	2,626	510
Average hourly earnings.....	\$0.783	\$0.784	\$0.772	\$0.818	\$0.862	\$0.615	\$0.666	\$1.240

<sup>1</sup> Less than a tenth of 1 percent.

<sup>4</sup> In addition to their somewhat different scope, the data presented in table 3 include premium payments for overtime work; such payments are excluded from the hourly earnings figures appearing elsewhere in this report.

This general picture has only limited significance, since the industry is made up of branches with very different wage levels. Average hourly earnings by branch ranged from a low of 61.5 cents in the book-binding division to a high of \$1.24 in the gravure branch. Because of this variance, the earnings of workers in each of the individual branches merit special analysis.

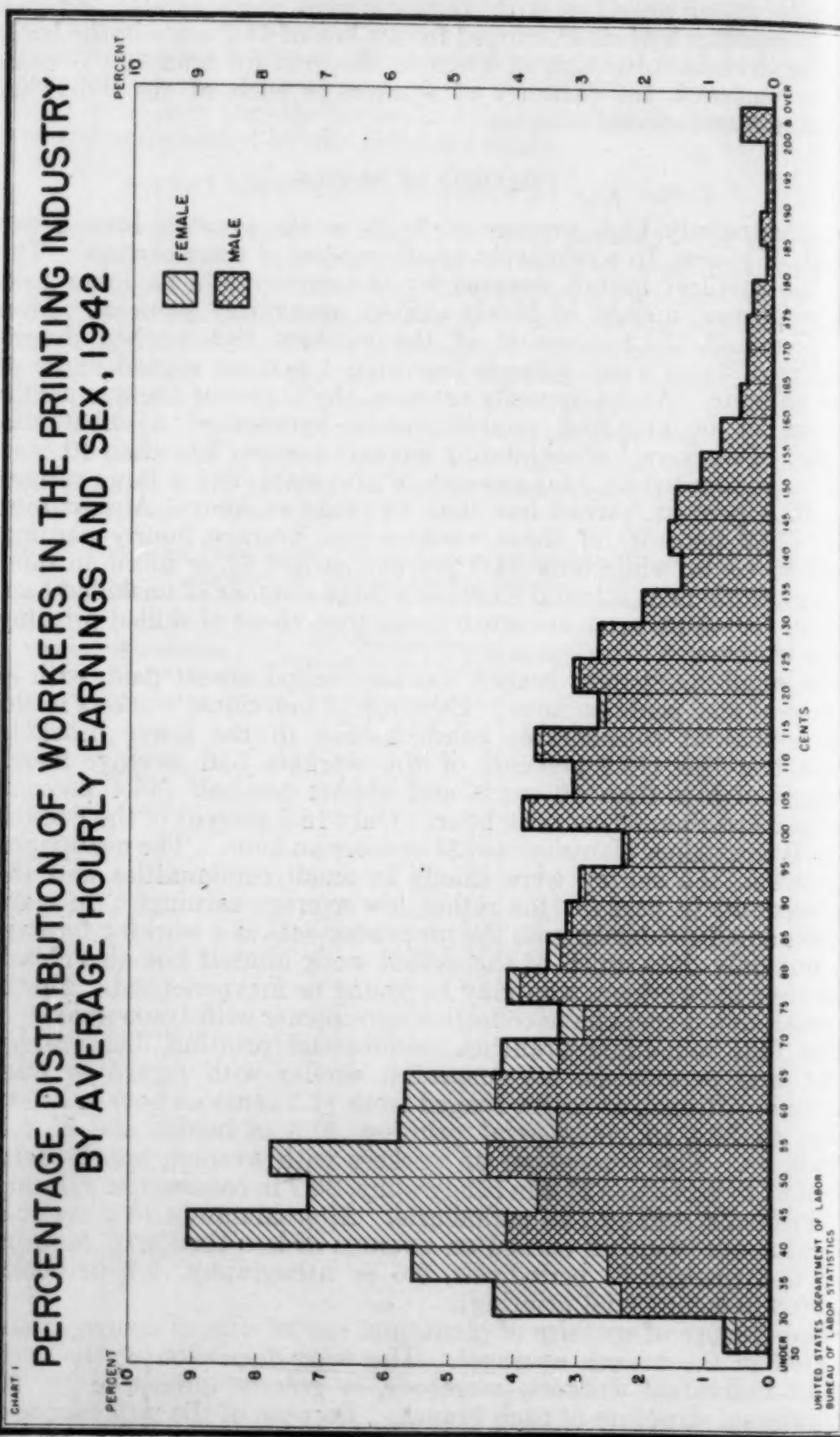
#### VARIATIONS BY BRANCH

The extremely high average of \$1.24 in the gravure branch pertained, of course, to a relatively small number of wage earners. This was the smallest branch covered by the survey and its labor force was comprised mainly of highly skilled, specialized workers. More than one-half (53.8 percent) of the workers had average hourly earnings of \$1 or over, whereas less than 1 percent earned under 40 cents an hour. At the opposite extreme, the 61.5-cent average paid to workers in bookbinding establishments represented a substantial number of workers. Bookbinding workers earning less than 40 cents an hour amounted to 14.0 percent of the total, and a large proportion, 62.3 percent, earned less than 60 cents an hour. Almost four-fifths (79.2 percent) of these workers had average hourly earnings under 80 cents, while only 14.0 percent earned \$1 or more an hour. Bindery workers as a group embrace a large number of unskilled hand workers for whom rates are much lower than those of skilled printing-trades workers.

The small-newspapers branch was the second lowest paid, with an average of 66.6 cents an hour. Earnings of individual workers in this branch showed considerable concentration in the lower brackets; almost one-fifth (19.1 percent) of the workers had average hourly earnings of less than 40 cents and almost one-half (46.4 percent) averaged less than 60 cents an hour. Only 18.5 percent of the workers in small newspaper plants earned \$1 or more an hour. The newspapers included in the survey were chiefly in small communities and this fact accounts in part for the rather low average earnings. In many of these small establishments the proprietor acts as a working foreman and not only does much of the skilled work himself but also closely supervises his workers, who may be young or inexperienced. Few of the small newspapers have collective agreements with trade-unions.

The four remaining branches, commercial printing, lithography, books, and periodicals, are somewhat similar with regard to wage structure. Branch averages ranged from 77.2 cents an hour in lithography, to 78.4 in commercial printing, 81.8 in books, and 86.2 in periodicals. The percentage of workers with average hourly earnings of \$1 or more was 27.2 in lithography, 30.7 in commercial printing, 33.7 in books, and 40.1 in periodicals. Approximately 10 percent in each of these branches earned an average of less than 40.0 cents an hour (8.4 percent in periodicals, 9.5 in lithography, 9.7 in books, and 10.8 in commercial printing).

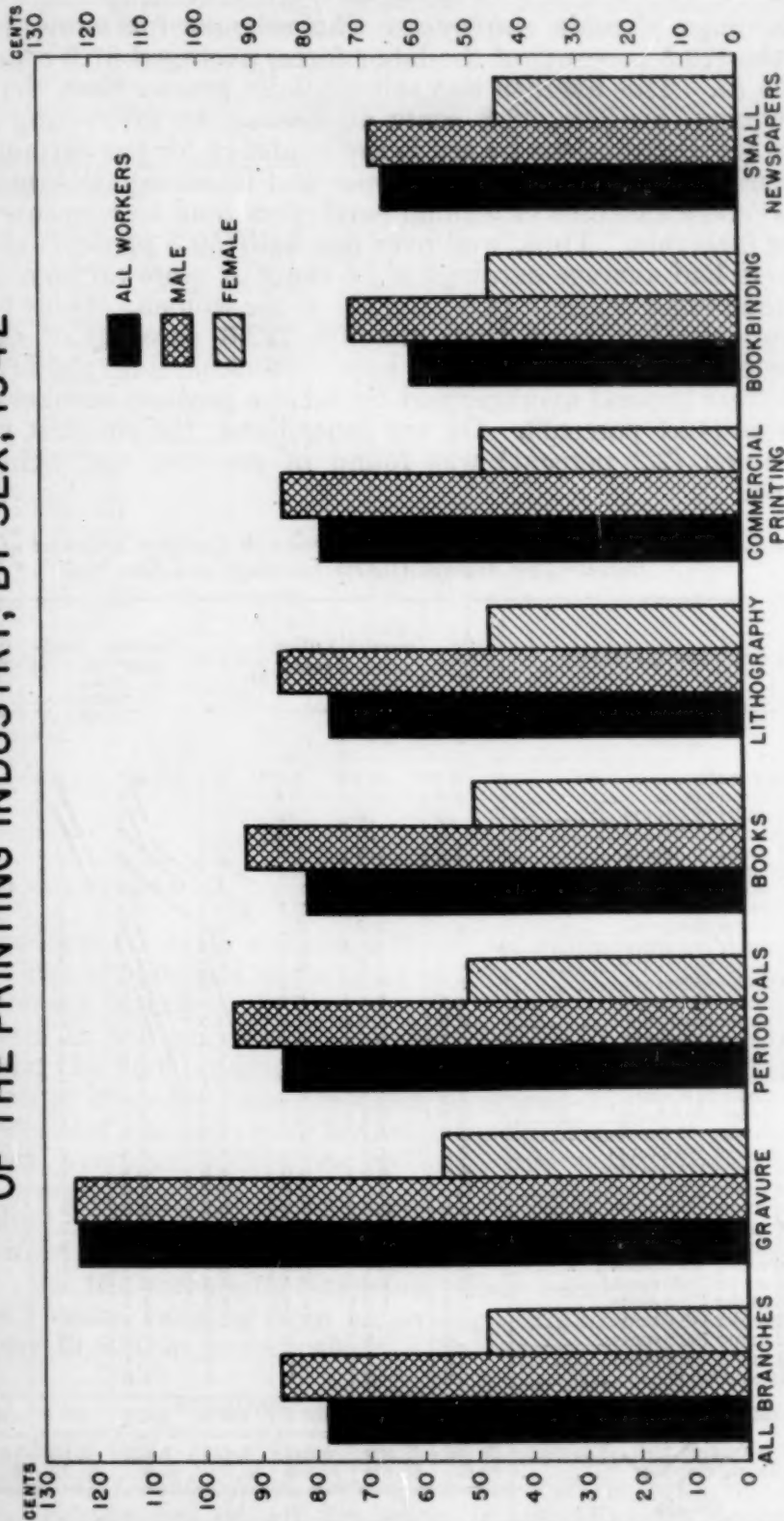
The influence of sex, size of plant, and size of city, of course, is also reflected in the branch averages. The wide dispersion of the earnings of individual workers, moreover, is greatly influenced by the occupational structure of each branch. Because of the importance of these factors, they are discussed individually in subsequent sections of this report. (See chart 2.)





# AVERAGE HOURLY EARNINGS OF WORKERS IN SPECIFIED BRANCHES OF THE PRINTING INDUSTRY, BY SEX, 1942

CHART 2



UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

## WAGE DIFFERENCES, BY SEX

Earnings of male employees, who account for more than three-fourths (76.3 percent) of the labor force, averaged 87.0 cents an hour (table 5). This average was substantially greater than that attained by woman workers, 48.8 cents an hour. An interesting feature of the wage distributions by sex is the tendency for the earnings of male workers to concentrate in the upper and intermediate brackets while the average earnings of woman employees tend to concentrate in the lower intervals. Thus, well over one-half (59.2 percent) of the male workers had average earnings of 75 cents or more an hour as against less than one-twentieth (4.6 percent) of the women. Only 7.0 percent of the men but more than one-fifth (22.6 percent) of the women averaged less than 40 cents an hour. Bookbinding, the branch with the lowest general average, had by far the greatest number of woman workers (46.1 percent). On the other hand, the smallest proportion of women (2.2 percent) was found in gravure, the highest-paying branch.

TABLE 5.—Percentage Distribution of Wage Earners in Specified Branches of the Printing Industry, by Average Hourly Earnings and Sex, 1942

Average hourly earnings	All branches	Commercial printing	Lithography	Books	Periodicals	Book-binding	Small newspapers	Gravure
<b>Males</b>								
Under 30.0 cents	0.7	0.7	0.1	0.1	0.1	0.3	5.2	0.2
Exactly 30.0 cents	1.8	2.2	1.3	1.0	.9	2.3	3.6	-----
30.1 and under 32.5 cents	.4	.5	.6	.2	.2	.2	1.0	-----
32.5 and under 35.0 cents	.8	.8	.5	1.0	.4	1.3	1.5	-----
35.0 and under 37.5 cents	1.8	1.9	1.9	1.0	1.9	2.4	2.5	.4
37.5 and under 40.0 cents	1.5	1.5	1.4	1.4	1.0	1.6	2.5	-----
Exactly 40.0 cents	3.3	2.9	3.2	3.5	2.8	10.4	1.9	-----
40.1 and under 45.0 cents	2.1	1.9	2.4	1.8	2.3	2.1	4.0	.2
45.0 and under 50.0 cents	4.7	3.7	6.3	4.9	4.3	8.8	4.9	2.6
50.0 and under 55.0 cents	5.8	5.4	6.2	6.1	4.5	7.0	8.5	3.4
55.0 and under 60.0 cents	4.2	3.6	4.5	5.3	3.4	5.3	6.9	3.4
60.0 and under 65.0 cents	5.6	5.5	4.8	5.2	4.9	7.7	8.9	3.8
65.0 and under 70.0 cents	4.3	4.4	5.2	3.9	3.2	4.4	5.1	2.6
70.0 and under 75.0 cents	3.8	3.9	3.6	3.2	3.7	4.0	4.6	7.2
75.0 and under 80.0 cents	5.1	5.5	5.4	4.4	3.6	4.8	7.0	1.8
80.0 and under 85.0 cents	4.4	5.2	4.5	3.1	3.0	4.5	3.8	5.8
85.0 and under 90.0 cents	4.0	4.4	4.9	2.6	3.3	2.8	3.6	10.3
90.0 and under 95.0 cents	3.8	4.5	4.2	3.0	3.3	2.7	2.4	1.8
95.0 and under 100.0 cents	3.0	3.1	2.9	3.0	3.4	2.0	2.0	1.8
100.0 and under 105.0 cents	5.0	5.9	4.2	4.4	4.6	3.9	4.0	1.6
105.0 and under 110.0 cents	4.0	4.2	3.0	4.3	5.4	2.7	3.4	.4
110.0 and under 115.0 cents	4.8	5.0	4.0	4.9	6.4	4.0	2.1	4.2
115.0 and under 120.0 cents	3.5	3.9	2.8	3.2	4.6	2.5	2.1	1.6
120.0 and under 125.0 cents	4.0	3.6	3.3	5.2	5.8	3.8	2.2	5.0
125.0 and under 130.0 cents	3.5	3.6	3.3	3.0	4.9	2.7	1.7	.4
130.0 and under 140.0 cents	4.3	3.9	5.1	4.7	5.7	3.7	1.9	2.2
140.0 and under 150.0 cents	4.0	3.7	3.8	6.8	5.1	1.2	.7	4.2
150.0 and under 160.0 cents	2.5	2.4	2.5	3.9	2.7	.5	.9	2.4
160.0 and under 170.0 cents	1.2	1.0	1.4	2.1	1.3	.4	.7	2.4
170.0 and under 180.0 cents	.9	.5	1.2	1.6	1.3	(1)	.3	9.0
180.0 and under 190.0 cents	.4	.3	.7	.5	.6	(1)	-----	2.0
190.0 and under 200.0 cents	.2	.1	.2	.3	.4	-----	-----	2.8
200.0 cents and over	.6	.3	.6	.4	1.0	-----	.1	16.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Number of workers	39,363	17,699	5,847	5,420	5,421	2,112	2,365	499
Average hourly earnings	\$0.870	\$0.859	\$0.866	\$0.929	\$0.951	\$0.730	\$0.657	\$1.249
<b>Females</b>								
Under 30.0 cents	0.7	0.7	0.2	0.2	0.2	0.3	15.0	9.1
Exactly 30.0 cents	4.9	5.4	3.0	2.5	7.4	5.3	10.0	-----
30.1 and under 32.5 cents	.8	.8	.8	.1	1.2	.6	3.1	-----
32.5 and under 35.0 cents	3.0	3.2	2.6	3.2	1.6	3.6	5.7	-----
35.0 and under 37.5 cents	7.1	6.9	8.0	5.8	8.4	7.1	6.5	-----

<sup>1</sup> Less than a tenth of 1 percent.

TABLE 5.—Percentage Distribution of Wage Earners in Specified Branches of the Printing Industry, by Average Hourly Earnings and Sex, 1942—Continued

Average hourly earnings	All branches	Commercial printing	Lithography	Books	Periodicals	Book-binding	Small newspapers	Gravure
<i>Females—Continued</i>								
37.5 and under 40.0 cents.....	6.1	5.9	5.1	11.2	3.7	4.0	5.0	-----
Exactly 40.0 cents.....	11.0	11.6	11.7	9.1	5.1	16.2	8.0	9.1
40.1 and under 45.0 cents.....	10.0	9.3	11.8	13.9	7.7	8.5	3.4	-----
45.0 and under 50.0 cents.....	15.4	16.7	19.6	11.5	17.4	12.1	8.0	-----
50.0 and under 55.0 cents.....	14.2	14.8	15.0	12.0	13.4	15.7	10.8	72.7
55.0 and under 60.0 cents.....	10.8	9.1	8.0	12.2	15.8	13.2	7.7	-----
60.0 and under 65.0 cents.....	6.0	6.0	6.0	6.7	4.6	6.4	4.6	-----
65.0 and under 70.0 cents.....	3.7	3.4	4.7	3.6	2.7	4.4	1.5	-----
70.0 and under 75.0 cents.....	1.7	1.7	.9	2.8	1.9	1.1	1.9	-----
75.0 and under 80.0 cents.....	1.0	1.1	.7	1.1	1.6	.5	1.5	-----
80.0 and under 85.0 cents.....	.7	.7	.6	.4	1.0	.4	1.9	-----
85.0 and under 90.0 cents.....	.5	.3	.4	.8	1.1	.2	1.1	-----
90.0 and under 95.0 cents.....	.4	.4	.1	.4	.6	.1	1.1	-----
95.0 and under 100.0 cents.....	.2	.3	-----	.1	.7	.1	.4	-----
100.0 and under 105.0 cents.....	.4	.3	.2	.1	1.2	.1	.8	-----
105.0 and under 110.0 cents.....	.1	.2	-----	.1	.1	-----	.8	-----
110.0 and under 115.0 cents.....	.3	.3	-----	.6	.4	-----	-----	-----
115.0 and under 120.0 cents.....	.2	.2	.1	.1	.7	-----	-----	-----
120.0 and under 125.0 cents.....	.3	.1	.2	.6	.3	.1	.8	9.1
125.0 and under 130.0 cents.....	.1	.1	.1	(1)	.5	-----	-----	-----
130.0 and under 140.0 cents.....	.2	.3	.1	.1	.3	-----	-----	-----
140.0 and under 150.0 cents.....	.2	.1	-----	.6	.4	-----	-----	-----
150.0 and under 160.0 cents.....	(1)	.1	-----	.1	-----	-----	-----	-----
160.0 and under 170.0 cents.....	(1)	(1)	-----	-----	-----	-----	-----	-----
170.0 and under 180.0 cents.....	(1)	-----	.1	.1	-----	-----	.4	-----
180.0 and under 190.0 cents.....	-----	-----	-----	-----	-----	-----	-----	-----
190.0 and under 200.0 cents.....	-----	-----	-----	-----	-----	-----	-----	-----
200.0 cents and over.....	(1)	(1)	-----	-----	-----	-----	-----	-----
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers.....	12,206	4,615	1,991	2,045	1,474	1,809	261	11
Average hourly earnings.....	\$0.488	\$0.485	\$0.475	\$0.504	\$0.520	\$0.472	\$0.452	\$0.570

<sup>1</sup> Less than a tenth of 1 percent.

The averages for male workers differed, of course, from branch to branch. The lowest paid were those in the small-newspapers branch, whose average hourly earnings amounted to 68.7 cents. In contrast, males in the gravure branch had average hourly earnings of \$1.249. In the bookbinding branch, where the work is less exacting than in other branches, male workers averaged 73.0 cents an hour. Woman workers' earnings were lowest in the small-newspapers branch, where they averaged 45.2 cents an hour, and were highest in the gravure branch where they averaged 57.0 cents an hour. In the bookbinding branch, where almost one-half (46.1 percent) of the workers were women, hourly earnings averaged 47.2 cents for woman workers. In the remaining branches, their earnings had a spread of only 4.5 cents, ranging from an average of 47.5 cents an hour in lithography to 52.0 in periodicals.

#### REGIONAL WAGE DIFFERENCES

Geographical differences in wages also contribute to the wide dispersion in hourly earnings of workers in the various branches of the industry. Employees of all branches in the Pacific region, the highest-paid area, averaged 88.2 cents an hour (table 6). This average was substantially greater than 67.6 cents an hour averaged by workers in the South, the lowest-wage region. Averages in other regions ranged from 71.6 cents an hour in the Mountain area to 81.4 cents in the Middle Atlantic States.



TABLE 6.—Average Hourly Earnings in Specified Branches of the Printing Industry, by Region, 1942

Region <sup>1</sup>	All branches	Commercial printing	Lithography	Books	Periodicals	Book-binding	Small newspapers	Gravure
Average hourly earnings								
All regions.....	\$0.783	\$0.784	\$0.772	\$0.818	\$0.862	\$0.615	\$0.666	\$1.240
Pacific.....	.882	.894	.921	.631	1.114	.777	.663	.....
Mountain.....	.716	.745	.704	.827	.707	.457	.678	.....
Great Lakes.....	.787	.799	.764	.810	.837	.612	.689	.920
Middle Atlantic.....	.814	.804	.792	.865	.939	.626	.723	1.286
New England.....	.723	.698	.746	.872	.791	.531	.678	.....
South.....	.676	.682	.657	.677	.744	.551	.544	( <sup>2</sup> )
Number of workers								
All regions.....	51,569	22,314	7,838	7,465	6,895	3,921	2,626	510
Pacific.....	3,247	2,315	553	82	65	88	144	.....
Mountain.....	1,262	753	54	16	28	25	386	.....
Great Lakes.....	21,171	8,541	3,840	4,274	2,506	870	1,117	23
Middle Atlantic.....	16,767	5,996	2,489	2,248	2,710	2,490	407	427
New England.....	3,710	1,770	201	386	845	369	139	.....
South.....	5,412	2,939	701	459	741	79	433	60

<sup>1</sup> The States included in the various regions are as follows: *Pacific*.—California, Oregon, and Washington. *Mountain*.—Arizona, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Utah, and Wyoming. *Great Lakes*.—Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. *Middle Atlantic*.—New Jersey, New York, and Pennsylvania. *New England*.—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. *South*.—Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

<sup>2</sup> Number of plants insufficient to permit presentation of an average.

Variations between regions are emphasized by the distributions based upon hourly earnings of individuals (table 7). Only 3.0 percent of the workers in the Pacific region had average hourly earnings of less than 40 cents whereas such workers in the South amounted to more than one-fifth (20.6 percent) of the total. The proportion of workers earning an average of \$1 or more an hour did not vary radically from region to region. The range was from slightly more than one-fifth (21.1 percent) in the South to almost two-fifths (39.4 percent) in the Pacific area. Distributions in other regions, taking the same general pattern, fell between these two extremes.

TABLE 7.—Percentage Distribution of Wage Earners in the Printing Industry,<sup>1</sup> by Average Hourly Earnings and Region, 1942

Average hourly earnings	All regions	Pacific	Mountain	Great Lakes	Middle Atlantic	New England	South
Under 30.0 cents.....	0.7	0.6	3.6	0.6	0.4	0.1	2.0
Exactly 30.0 cents.....	2.5	.4	4.4	2.1	2.2	1.8	6.6
30.1 and under 32.5 cents.....	.5	.2	1.6	.4	.4	.3	1.2
32.5 and under 35.0 cents.....	1.3	.5	1.8	1.2	1.4	.6	2.7
35.0 and under 37.5 cents.....	3.1	.7	4.2	2.9	3.0	3.8	4.7
37.5 and under 40.0 cents.....	2.6	.6	2.4	2.6	2.8	1.8	3.4
Exactly 40.0 cents.....	5.1	1.5	3.7	5.1	5.3	9.1	4.5
40.1 and under 45.0 cents.....	4.0	1.9	3.8	4.2	3.8	4.1	5.0
45.0 and under 50.0 cents.....	7.2	5.1	4.9	7.9	6.8	7.2	7.2
50.0 and under 55.0 cents.....	7.9	7.2	9.8	7.8	7.6	7.7	7.1
55.0 and under 60.0 cents.....	5.8	6.2	2.9	6.2	5.9	5.3	4.7
60.0 and under 65.0 cents.....	5.7	6.8	6.1	5.8	5.3	5.8	5.4
65.0 and under 70.0 cents.....	4.2	6.8	3.5	4.2	3.9	4.0	3.7
70.0 and under 75.0 cents.....	3.3	1.9	3.2	3.5	3.2	4.0	3.4
75.0 and under 80.0 cents.....	4.1	6.1	3.9	3.9	3.7	5.7	4.1
80.0 and under 85.0 cents.....	3.5	3.9	3.8	3.5	3.1	4.9	3.4
85.0 and under 90.0 cents.....	3.2	3.5	3.2	2.9	3.3	4.2	3.3
90.0 and under 95.0 cents.....	3.0	4.0	2.9	3.1	2.4	3.5	3.7
95.0 and under 100.0 cents.....	2.3	2.7	1.7	2.2	2.1	3.4	2.8
100.0 and under 105.0 cents.....	3.9	3.8	6.4	3.5	3.7	4.3	5.1
105.0 and under 110.0 cents.....	3.1	2.6	5.5	2.9	2.7	4.9	3.9
110.0 and under 115.0 cents.....	3.7	3.4	4.4	3.4	3.6	7.2	3.0
115.0 and under 120.0 cents.....	2.7	3.4	3.2	3.3	2.3	1.2	2.2
120.0 and under 125.0 cents.....	3.1	3.4	2.5	3.2	4.1	1.4	.9
125.0 and under 130.0 cents.....	2.7	3.9	2.3	2.8	2.9	.9	2.0
130.0 and under 140.0 cents.....	3.3	9.5	2.9	2.7	3.8	1.2	2.0
140.0 and under 150.0 cents.....	3.1	5.2	.4	3.4	3.8	.8	.9
150.0 and under 160.0 cents.....	1.9	2.4	.2	2.0	2.6	.3	.6
160.0 and under 170.0 cents.....	.9	.8	.4	1.3	1.0	.2	.2
170.0 and under 180.0 cents.....	.7	.5	.2	.6	1.2	.2	.1
180.0 and under 190.0 cents.....	.3	.2	.1	.3	.5	(?)	.1
190.0 and under 200.0 cents.....	.1	.1	-----	.2	.2	-----	(?)
200.0 cents and over.....	.5	.2	.1	.3	1.0	.1	.1
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of plants.....	3,419	342	219	1,158	913	233	554
Number of workers.....	51,569	3,247	1,262	21,171	16,767	3,710	5,412
Average hourly earnings.....	\$0.783	\$0.882	\$0.716	\$0.787	\$0.814	\$0.723	\$0.676

<sup>1</sup> Includes the small newspapers, commercial printing, books, periodicals, bookbinding, lithography, and gravure branches.

<sup>2</sup> Less than a tenth of 1 percent.

Within the large commercial printing branch, average hourly earnings varied from 68.2 cents in the South to 89.4 cents in the Pacific area (table 8). It is noteworthy that even within a given region in this one branch the workers show wide variation in average hourly earnings.

TABLE 8.—Percentage Distribution of Wage Earners in Commercial Printing Branch of Printing Industry, by Average Hourly Earnings and Region, 1942

Average hourly earnings	All regions	Pacific	Mountain	Great Lakes	Middle Atlantic	New England	South
Under 30.0 cents.....	0.7	0.4	2.1	0.5	0.6	0.1	1.8
Exactly 30.0 cents.....	2.9	.3	4.4	2.2	2.5	2.3	7.6
30.1 and under 32.5 cents.....	.5	.2	1.5	.6	.3	.6	.8
32.5 and under 35.0 cents.....	1.3	.2	2.3	1.3	1.2	.7	2.4
35.0 and under 37.5 cents.....	3.0	.6	3.6	2.9	3.0	3.8	4.3
37.5 and under 40.0 cents.....	2.4	.5	2.0	1.9	3.5	2.2	3.5
Exactly 40.0 cents.....	4.7	1.3	4.0	4.8	4.6	8.6	4.9
40.1 and under 45.0 cents.....	3.4	1.6	2.0	3.3	4.1	3.8	3.6
45.0 and under 50.0 cents.....	6.4	4.9	5.0	7.0	5.9	7.2	6.5
50.0 and under 55.0 cents.....	7.3	7.9	10.4	7.5	6.8	8.4	6.7
55.0 and under 60.0 cents.....	4.7	6.9	2.7	5.0	4.1	4.1	4.1
60.0 and under 65.0 cents.....	5.6	7.0	5.4	5.1	5.5	6.8	5.3
65.0 and under 70.0 cents.....	4.2	5.9	3.3	4.5	3.4	4.7	3.6
70.0 and under 75.0 cents.....	3.5	2.2	2.4	3.9	3.1	3.9	3.9
75.0 and under 80.0 cents.....	4.6	4.5	3.5	4.0	4.9	6.7	4.5
80.0 and under 85.0 cents.....	4.3	3.2	4.4	4.4	4.1	5.9	4.3
85.0 and under 90.0 cents.....	3.6	3.2	3.6	3.1	4.1	5.0	3.4
90.0 and under 95.0 cents.....	3.7	3.8	3.9	3.9	3.0	3.4	4.3
95.0 and under 100.0 cents.....	2.5	2.7	1.9	2.3	2.3	3.9	2.9
100.0 and under 105.0 cents.....	4.7	4.1	7.8	3.8	5.0	5.4	6.3
105.0 and under 110.0 cents.....	3.4	2.9	6.8	3.4	2.8	3.4	4.3
110.0 and under 115.0 cents.....	4.0	4.0	5.3	3.9	3.7	6.1	3.1
115.0 and under 120.0 cents.....	3.1	4.2	3.2	4.1	2.6	.8	2.0
120.0 and under 125.0 cents.....	2.9	4.6	2.3	2.9	4.0	.3	.9
125.0 and under 130.0 cents.....	2.9	4.5	2.1	3.2	3.0	.5	2.0
130.0 and under 140.0 cents.....	3.2	9.2	2.5	2.6	3.2	.3	1.8
140.0 and under 150.0 cents.....	3.0	5.2	.5	3.2	4.0	.3	.7
150.0 and under 160.0 cents.....	1.9	2.5	.1	2.5	2.5	.3	.3
160.0 and under 170.0 cents.....	.8	.6	.5	1.0	1.1	.3	.1
170.0 and under 180.0 cents.....	.4	.6	.3	.5	.6	.....	.1
180.0 and under 190.0 cents.....	.2	.1	.1	.3	.3	.1	(1)
190.0 and under 200.0 cents.....	(1)	.....	.....	.1	(1)	.....	(1)
200.0 cents and over.....	.2	.2	.1	.3	.2	.1	(1)
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of plants.....	2,227	250	105	728	620	171	353
Number of workers.....	22,314	2,315	753	8,541	5,996	1,770	2,939
Average hourly earnings.....	\$0.784	\$0.894	\$0.745	\$0.799	\$0.804	\$0.698	\$0.682

(1) Less than a tenth of 1 percent.

## SIZE OF COMMUNITY

Average hourly earnings are also affected by size of community. It will be noted that in all branches combined average earnings rise gradually from 66.7 cents in the smallest city-size category, under 2,500 population, to 84.9 cents in the largest city classification, 1,000,000 and over (table 9). The same general pattern, although somewhat less regular, is exhibited by the averages in each of the individual branches.

TABLE 9

Size

All cities—  
Under  
2,500  
10,000  
50,000  
250,000  
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TABLE 9.—Average Hourly Earnings in Specified Branches of the Printing Industry, by Size of City, 1942

Size of city (population)	All branches	Commercial printing	Lithography	Books	Periodicals	Book-binding	Small newspapers	Gravure
Average hourly earnings								
All cities.....	\$0.783	\$0.784	\$0.772	\$0.818	\$0.862	\$0.615	\$0.666	\$1.240
Under 2,500.....	.667	.574	.....	.623	.811	.....	.509	( <sup>1</sup> )
2,500 and under 10,000.....	.670	.670	.602	.633	.872	.463	.597	.....
10,000 and under 50,000.....	.719	.682	.748	.721	.778	.488	.798	.....
50,000 and under 250,000.....	.752	.764	.751	.794	.805	.570	.784	.....
250,000 and under 1,000,000.....	.790	.799	.735	.812	.855	.630	.918	1.018
1,000,000 and over.....	.849	.855	.819	.863	.985	.652	1.037	1.286
Number of workers								
All cities.....	51,569	22,314	7,838	7,465	6,895	3,921	2,626	510
Under 2,500.....	1,929	320	.....	25	906	.....	675	3
2,500 and under 10,000.....	3,416	1,351	183	112	625	203	942	.....
10,000 and under 50,000.....	6,469	3,085	872	936	897	80	599	.....
50,000 and under 250,000.....	9,016	4,001	1,159	1,418	1,418	929	91	.....
250,000 and under 1,000,000.....	11,807	5,987	2,287	1,605	1,190	488	170	80
1,000,000 and over.....	18,932	7,570	3,337	3,369	1,859	2,221	149	427

<sup>1</sup> Number of plants insufficient to permit presentation of an average.

## SIZE OF ESTABLISHMENT

A comparison of average hourly earnings by size of establishment appears in table 10. These data leave little doubt that earnings in the industry are also closely related to the size of the operating unit. This relationship is not as obvious in some branches as in others, however. In the small-newspapers branch the averages by size of company reveal a definite progression. In most of the remaining branches a more irregular trend is indicated. If average hourly earnings vary according to size of establishment in the lithography branch, that fact is not apparent from the data at hand.

TABLE 10.—Average Hourly Earnings in Specified Branches of the Printing Industry, by Size of Establishment, 1942

Size of establishment	All branches	Commercial printing	Lithography	Books	Periodicals	Book-binding	Small newspapers	Gravure
Average hourly earnings								
All establishments.....	\$0.783	\$0.784	\$0.772	\$0.818	\$0.862	\$0.615	\$0.666	\$1.240
1 to 5 workers.....	.664	.699	.748	.734	.678	.658	.565	( <sup>1</sup> )
6 to 20 workers.....	.740	.760	.784	.729	.808	.598	.683	( <sup>1</sup> )
21 to 50 workers.....	.804	.812	.819	.825	.854	.632	.849	( <sup>1</sup> )
51 to 100 workers.....	.775	.818	.720	.765	.735	.541	1.109	( <sup>1</sup> )
101 to 250 workers.....	.772	.806	.770	.760	.852	.580	.....	( <sup>1</sup> )
251 to 500 workers.....	.803	.667	.791	.799	.817	.609	.....	( <sup>1</sup> )
501 to 1,000 workers.....	.888	.949	.725	.906	.917	.....	.....	.....
1,001 workers and over.....	.869	( <sup>1</sup> )	.....	.827	.949	.....	.....	.....
Number of workers								
All establishments.....	51,569	22,314	7,838	7,465	6,895	3,921	2,626	510
1 to 5 workers.....	5,276	3,458	79	73	76	282	1,305	3
6 to 20 workers.....	8,106	5,694	421	340	150	693	798	20
21 to 50 workers.....	8,803	5,115	932	787	763	795	384	27
51 to 100 workers.....	6,302	3,421	1,025	482	756	419	139	- 60
101 to 250 workers.....	8,018	3,070	2,534	572	987	855	.....	.....
251 to 500 workers.....	7,328	471	2,215	1,802	1,563	877	.....	400
501 to 1,000 workers.....	3,712	855	632	1,210	1,015	.....	.....	.....
1,001 workers and over.....	4,024	240	.....	2,199	1,585	.....	.....	.....

<sup>1</sup> Number of plants insufficient to permit presentation of an average.

EARNINGS IN THE MANUFACTURE OF MACHINE TOOLS, 1942<sup>1</sup>*Summary*

THIS report on earnings in plants manufacturing machine tools is the seventh in the series undertaken by the Bureau of Labor Statistics for the purpose of providing information on the effects of the war on the several branches of the machinery industry.<sup>2</sup>

The importance of machine tools in the production of war materials has had a marked effect on earnings and hours in this industry. Average hourly earnings, which amounted to 79.9 cents in August 1939, had risen to \$1.017 by the spring of 1942. Earnings in the industry have been progressively affected by the lengthened workweek, which increased by nearly 10 hours during this interval. If extra payments for overtime work were eliminated, it is estimated that the average hourly earnings figure of \$1.017 would be reduced by almost 12 cents. It is not possible to calculate accurately the amounts resulting from premiums for night work; that they are fairly significant is apparent from the fact that of the 46 plants included in this study, 21 were operating 2 shifts and 19 were on a 3-shift basis.

The establishments in this industry are concentrated largely in the Northeast and Middle West. Although midwestern plants appear to pay higher wages than do eastern plants, the determination of the amount of the regional differences is complicated by correlated differences in size of plant, extent of unionization, size of community, and method of wage payment, all of which affect earnings.

The relatively high level of earnings in the industry is apparent from the fact that 22 occupational groups, which include more than a fourth of the male workers studied in detail, show averages above \$1.00 per hour, exclusive of extra payments for overtime and night work. Except for apprentices, none of the groups of male workers showed averages below 60 cents per hour.

*Scope and Method of Survey*

In order to provide basic information on the effects of the transition to a war economy on technological processes, occupational patterns, and wage structures, the Bureau of Labor Statistics has undertaken a series of studies in establishments manufacturing various types of machinery and similar products. Each of the industrial branches covered in this series is defined in terms of the principal products of the various plants during the year 1939 as reported by the Census of Manufactures. Important changes in type of product are to be expected, especially because the war emergency has accentuated the shifts in production that would ordinarily occur over a 3-year period. The data on these changes are in themselves significant, however, and it is thus useful to begin with the 1939 classification as a starting point.

According to the Census of Manufactures there were 200 plants engaged primarily in the manufacture of complete machine tools in

<sup>1</sup> Prepared in the Division of Wage Analysis by Harold R. Hosea.

<sup>2</sup> Previous articles in this series have appeared in each issue of the Monthly Labor Review, May–August 1942; individual reports are available on request.

1939. These establishments include only those producing "power-driven machinery employing a cutting tool for work on metal."<sup>3</sup> Plants manufacturing machine-tool and other metal-working machinery accessories will be discussed in a subsequent report, as will also those establishments producing machinery for the shaping, pressing, and forging of metal.

Of the 200 plants in the machine-tool group, 20 employed an average of 5 workers or less in 1939 and were excluded from this survey; the 46 establishments studied thus constitute slightly more than a fourth of the remaining plants which employed an average of 6 or more workers in 1939. The plants included in the survey were selected in such a way as to present a representative cross section of the industry.

The data for the present survey were collected by trained field representatives of the Bureau who visited the plants and analyzed pay rolls and other pertinent records. The detailed wage data on individual employees are limited to day-shift workers in certain occupational groups selected for their numerical importance or because they are key jobs. In general, however, occupational earnings rates were compiled for 80 to 90 percent of the wage earners on first (day) shifts. The earnings data shown in this report, in most instances, are based on a representative pay-roll period during April, May, or June 1942.

## *Characteristics of the Industry*

### GEOGRAPHIC DISTRIBUTION

More than 40 percent of the plants classified by the Census in this industry are in the Northeast; a fourth of them are in New England. The greater number of the remainder are in the North Central States, with Ohio, Michigan, and Illinois the most important single States. Few such plants are found elsewhere in the country.

The importance of machine tools in the production of war materials is generally appreciated; employment in these plants has shown substantial increases as a result of expanding war production. Because of the elaborate character of most machine tools, the production of such equipment is, in general, carried on in plants considerably larger than those manufacturing many other types of industrial machinery.

### THE LABOR FORCE

Approximately 35 percent of the male workers for whom detailed wage and occupational data were collected may be classified as skilled, about 46 percent are semiskilled, and the remaining 19 percent unskilled. It will be noted that the proportion of skilled workers in this industry is not markedly higher than the ratios found in certain other branches of the machinery industries, despite the fact that the manufacture of machine tools involves large amounts of high-precision work. This apparent anomaly is explained in part by the relatively large size of the typical machine-tool plant, a characteristic which permits a more elaborate division of labor (and consequent "dilution of skill") than is found in many other types of machinery manufacturing. Thus much of the high-precision work is carried on by the use

<sup>3</sup> This definition corresponds to that of Census industry No. 1741 and is somewhat more limited than that for the machine-tool industry in the Bureau's monthly statistics on employment and pay rolls.



of complex machinery operated by semiskilled employees, who are relatively more numerous in this industry than they are in some of the other machinery-manufacturing branches.

Prior to the outbreak of the war, except in central-office work, the manufacture of machine-tools provided employment for few women. At the time the present survey was made, women still constituted less than 2 percent of the factory workers in the plants studied; they were found in only 7 of the 46 plants. Bench assembly work was the most common occupation for women, and appreciable numbers of learners were found in this category. Inspection departments also reported numerous woman workers. Shortages of skilled male workers and increases in the use of automatic precision machines are reflected in a trend toward the employment of women as semiskilled and unskilled machine operators. Included in these occupations are burrers and operators of drill presses, engine lathes, grinding machines, milling machines, presses, and screw machines. There is little doubt that women will be employed for these types of work in increasing numbers.

Negroes constituted less than 1 percent of the workers in the 10 plants in which they were found; the remaining 36 plants employed no Negroes. Most of the Negro workers were laborers, janitors, helpers, and material handlers. Among the Negroes employed were 2 electricians, an auto mechanic, a crane operator, and a truck driver; all the others (130) were unskilled workers.

About one-third (15) of the 46 plants included in the survey were operating under agreements with nationally affiliated unions. Ten of these agreements involved unions affiliated with the American Federation of Labor, 3 with the Congress of Industrial Organizations, and 2 with the Mechanics Educational Society of America. Two-thirds of the larger plants (500 or more employees) reported such agreements. Three plants had agreements with independent unions, and the remaining 28 had no agreements. Union plants were more common in the Middle West than in the East.

#### METHOD OF WAGE PAYMENT

Approximately half of the employees in 12 of the larger plants were paid under an incentive-wage system. These workers constituted slightly more than a fifth (22 percent) of all those included in the survey. The remaining 78 percent of the workers studied were paid straight hourly rates.

In 8 of the smaller plants, payment for overtime work was made on the basis of the minimum statutory requirements, i. e., time and a half for work over 40 hours per week. In 34 plants this rate was also applied to any work above 8 hours in a day. All Saturday work in 14 of the plants was paid for at the rate of time and a half; in another this rate applied to the first 8 hours of Saturday work, double time being paid thereafter. For Sunday work 4 plants paid time and a half, 1 paid time and a half plus 10 percent, and 23 paid double time. The extent of continuous operation in this industry has resulted in methods of payment for overtime work not commonly found in the other machinery branches studied thus far. One plant paid time and a half for all work on the sixth consecutive day and double time for the seventh and for holidays, and another paid double time for work on the seventh consecutive day or above 12 hours in any day. In these latter cases, penalty rates do not apply to work on

Saturday and Sunday, unless these days constitute the sixth or seventh consecutive working day for the employee.

Twenty-one of the 46 plants studied were operating 2 shifts,<sup>4</sup> and 19 were on a 3-shift basis; only 6 plants reported a single shift. Of the 2-shift plants, 7 paid no premium for night work, 4 paid an additional 10 cents per hour, 3 had a 5-cent differential, and the remainder operated under other arrangements (table 1). In 4 of the plants operating 3 shifts, there was no differential for the second and third shifts. Eleven plants paid the same premiums to workers on both of the late shifts and the remaining 4 paid somewhat more liberal wages on the third shift than on the second.

TABLE 1.—*Scale of Wages for Second and Third Shifts in Plants Manufacturing Machine Tools*

Type of plant	Number of plants	Differential paid for—	
		Second shift	Third shift
Plants with 1 shift only—	6		
Plants with 2 shifts—	7	No differential.	
	4	10 cents per hour.	
	3	5 cents per hour.	
	2	10 percent over base rate.	
	1	5 cents per hour, plus paid rest period of $\frac{1}{2}$ hour.	
	1	8 cents per hour.	
	1	8.5 cents per hour.	
	1	10 percent over base rate, plus paid lunch period of $\frac{1}{2}$ hour.	
	1	10 percent over base rate, union members only.	
Plants with 3 shifts—	4	No differential.	No differential.
	5	10 percent over base rate.	10 percent over base rate.
	3	5 cents per hour.	5 cents per hour.
	2	10 cents per hour.	10 cents per hour.
	1	5 to 10 percent over base rate, based on length of service (minimum 5 cents per hour).	8 hours pay for 7.5 hours' work, plus 5 to 10 percent over base rate.
	1	5 cents per hour.	10 cents per hour.
	1	5 cents per hour, all journeymen (prorated to learners).	10 cents per hour, all journeymen (prorated to learners).
	1	6 cents per hour.	10 cents per hour.
	1	10 percent over base rate, machine operators and assemblers only.	10 percent over base rate.

## Hours and Earnings

### TREND FROM 1939 TO 1942

Data on the trend of earnings and hours for selected periods since August 1939 are available for 41 of the 46 plants studied.<sup>5</sup> Hourly earnings in these plants, including extra payments for overtime and night work, averaged 79.9 cents in August 1939. The corresponding averages for the latest period (April-June 1942) is \$1.017. Gross average hourly earnings in this industry have been inflated progressively by payments for overtime work, as is indicated by the increase of nearly 10 hours in the workweek during the 34-month period. These figures were compiled from the records of the plants included in this special survey and are not, as already pointed out, comparable with the Bureau's regular monthly series on this industry since the latter is based on a larger number of plants and a broader definition of the

<sup>4</sup> Some of these plants operate continuously by the use of two long shifts and a "swing" shift, the latter being used ordinarily to cover week ends.

<sup>5</sup> The plants for which comparable data are not available are, in general, small, and the general averages would presumably be changed but slightly by their inclusion in this comparison.

industry (see footnote 3, page 803). It may be noted, however, that the trend in earnings since August 1939, as indicated in table 2, corresponds closely to that shown by the Bureau's monthly series. It is estimated that the average hourly earnings in August 1939 would be reduced by slightly over 3 cents by the elimination of overtime payments. In the average for the latest period the estimated correction for this factor amounts to almost 12 cents, and reduces the hourly rate to about 90 cents (table 2). This figure is also affected, of course, by premium payments for extra-shift work. It is not possible to estimate accurately the effect of such bonuses on the general average, because of the great variety of methods of calculating such premiums in the different plants, the varying proportions of workers employed on second and third shifts, and other complex factors. As is indicated in table 3, the average straight-time hourly earnings of first-shift workers in the selected occupations amounted to 86.0 cents per hour.

TABLE 2.—Average Hourly Earnings and Average Weekly Hours of Workers in 41 Machine-Tool Plants, Selected Periods, 1939-42

Year and month	Average hourly earnings <sup>1</sup>	Estimated average hourly earnings exclusive of extra overtime earnings	Average weekly hours
August 1939.....	\$0.799	\$0.763	42.5
April 1940.....	.800	.736	46.7
August 1940.....	.796	.744	44.8
February 1941.....	.844	.754	50.7
August 1941.....	.914	.820	50.1
April-June 1942 <sup>2</sup> .....	1.017	.900	52.1

<sup>1</sup> The data for several large plants were used with reduced weight, in order to avoid overrepresentation of such plants.

<sup>2</sup> Data for 1 plant based on a January-February pay roll and for 4 plants based on March pay rolls.

#### EARNINGS FOR SELECTED OCCUPATIONS

Average hourly earnings, exclusive of extra payments for overtime and night work, are available for the greater part of the day-shift workers employed in the machine-tool plants studied. These workers constitute a sufficiently large proportion of total employment in such plants to provide reliable indexes of prevailing rates.<sup>6</sup>

The fairly high level of earnings in this industry is apparent from the fact that 22 occupational groups, which include 26.0 percent of the male workers whose earnings appear in table 3, show averages above \$1.00 per hour even when extra payments for overtime and night work are excluded. Most important numerically among these groups are the class A assemblers, the several categories of class A machine operators, class A working foremen, and tool and die makers. None of the groups of male workers showed averages below 60 cents per hour, with the exception of first- and second-year apprentices.

<sup>6</sup> Detailed data on numbers of workers and certain other factors are necessarily omitted from this discussion as well as from the tables in order to avoid disclosure of information on operations connected with the war program.



TABLE 3.—Average Hourly Earnings<sup>1</sup> of Day-Shift Workers in Selected Occupations in Machine-Tool Plants, by Region, April-June 1942

Occupation and class	United States		New England and Middle Atlantic		North Central States	
	Percent of workers	Average hourly earnings	Percent of workers	Average hourly earnings	Percent of workers	Average hourly earnings
All workers.....	100.0	\$0.860	100.0	\$0.776	100.0	\$0.924
Males, total.....	99.0	.863	98.2	.780	99.6	.926
Apprentices, first year.....	.4	.437	.5	.400	.3	.490
Apprentices, second year.....	.5	.560	.4	.509	.6	.590
Apprentices, third year.....	.5	.646	.4	.571	.6	.686
Apprentices, fourth year.....	.2	.706	.1	.620	.2	.775
Assemblers, bench, class A.....	4.0	1.044	4.6	.940	3.4	1.151
Assemblers, bench, class B.....	4.2	.954	4.0	.837	4.2	1.035
Assemblers, bench, class C.....	3.9	.841	1.7	.797	5.5	.851
Assemblers, floor, class A.....	3.5	1.025	4.1	.944	3.1	1.106
Assemblers, floor, class B.....	3.3	.838	3.6	.813	3.1	.860
Assemblers, floor, class C.....	2.3	.780	1.3	.753	3.0	.789
Blacksmiths.....	.1	.881	.1	.791	.1	.900
Boring-mill operators, class A.....	1.7	1.134	1.7	1.001	1.7	1.236
Boring-mill operators, class B.....	.5	.900	.4	.850	.6	.927
Broaching-machine operators.....	.1	.891	.1	.820	.1	.955
Buffers.....	.6	.817	.8	.612	.5	1.086
Burrers, class B.....	.3	.912	.2	.859	.3	.939
Burrers, class C.....	.4	.708	.6	.642	.3	.813
Carpenters, class A.....	.2	.958	.2	.896	.2	1.002
Carpenters, class B.....	.2	.824	.2	.787	.2	.850
Carpenters, class C.....	.4	.708	.5	.574	.3	.848
Casting cleaners.....	.5	.743	.3	.742	.6	.743
Chippers, class B.....	.4	1.008	.5	.925	.3	1.113
Chippers, class C.....	.1	.687	.2	.627	.1	.768
Coremakers, class A.....	.1	1.181	.2	( <sup>2</sup> )	.1	( <sup>2</sup> )
Crane followers.....	.2	.769	.4	.726	.1	.909
Crane operators.....	.5	.834	.4	.737	.5	.896
Craters.....	.6	.889	.4	.906	.7	.881
Drill-press operators, class A.....	1.6	.984	1.9	.887	1.5	1.079
Drill-press operators, class B.....	1.3	.849	1.1	.728	1.4	.920
Drill-press operators, class C.....	.9	.847	.4	.693	1.3	.880
Electricians.....	1.0	.947	1.1	.850	.9	1.042
Elevator operators.....	.1	.766	.1	.640	.2	.810
Firemen, stationary boiler.....	.1	.845	.2	.757	.1	.945
Foremen, working, class A.....	2.3	1.124	3.7	1.056	1.2	1.276
Foremen, working, class B.....	.5	1.043	.4	.978	.5	1.082
Gear cutters, class A.....	.4	1.005	.4	.881	.4	1.092
Gear cutters, class B.....	.4	.805	.4	.730	.4	.862
Gear finishers.....	.2	.938	.1	( <sup>2</sup> )	.3	.932
Grinding-machine operators, class A.....	2.5	1.022	2.7	.838	2.4	1.181
Grinding-machine operators, class B.....	1.9	.846	2.2	.735	1.6	.961
Grinding-machine operators, class C.....	.7	.886	.1	.708	1.1	.895
Heat treaters, class A.....	.5	.908	.5	.731	.4	1.066
Heat treaters, class B.....	.5	.796	.5	.721	.5	.852
Helpers, journeymen.....	.7	.708	.9	.647	.6	.777
Helpers, machine operators.....	.8	.674	1.5	.644	.2	.819
Inspectors, class A.....	1.7	.926	2.5	.824	1.1	1.106
Inspectors, class B.....	1.5	.866	1.3	.666	1.6	.993
Inspectors, class C.....	.4	.709	.2	.703	.5	.711
Janitors.....	1.5	.693	1.4	.596	1.6	.757
Job setters.....	( <sup>3</sup> )	1.204	( <sup>3</sup> )	( <sup>2</sup> )	.1	1.250
Laborers.....	1.5	.687	1.3	.601	1.6	.741
Laborers, foundry.....	.2	.675	.5	.680	( <sup>3</sup> )	( <sup>3</sup> )
Lathe operators, engine, class A.....	2.3	1.062	1.4	.974	3.1	1.092
Lathe operators, engine, class B.....	1.3	.858	.9	.819	1.7	.875
Lathe operators, engine, class C.....	.6	.813	.6	.744	.6	.872
Lathe operators, turret, class A.....	2.0	1.041	1.9	.909	2.1	1.133
Lathe operators, turret, class B.....	1.5	.840	1.3	.744	1.6	.899
Lathe operators, turret, class C.....	.3	.859	.1	( <sup>2</sup> )	.4	.878
Lay-out men, class A.....	.1	.994	.1	.963	.1	1.012
Learners, journeymen and other.....	6.9	.646	6.2	.617	7.2	.666
Learners, machine operators.....	6.7	.633	6.4	.594	7.1	.659
Machine operators, all-round.....	.7	.955	.5	.743	.8	1.048
Machinists.....	.9	1.015	.4	1.011	1.3	1.016
Metal-saw operators.....	.3	.707	.4	.657	.2	.790
Milling-machine operators, class A.....	1.8	.978	2.2	.862	1.4	1.119
Milling-machine operators, class B.....	1.2	.805	1.6	.714	1.0	.916
Milling-machine operators, class C.....	.3	.943	( <sup>2</sup> )	( <sup>2</sup> )	.5	.957
Millwrights.....	.6	.830	.9	.729	.4	1.001
Molders, bench and floor.....	.1	( <sup>3</sup> )	.3	( <sup>3</sup> )	.1	( <sup>3</sup> )

See footnotes at end of table.

TABLE 3.—Average Hourly Earnings<sup>1</sup> of Day-Shift Workers in Selected Occupations in Machine-Tool Plants, by Region, April–June 1942—Continued

Occupation and class	United States		New England and Middle Atlantic		North Central States	
	Percent of workers	Average hourly earnings	Percent of workers	Average hourly earnings	Percent of workers	Average hourly earnings
<b>Males—Continued.</b>						
Molders, machine.....	0.1	( <sup>2</sup> )	0.3	( <sup>2</sup> )		
Packers.....	.2	\$0.864	.2	\$0.737	0.2	\$0.947
Painters, brush.....	.9	.842	.6	.754	1.1	.880
Painters, spray.....	.7	.832	.7	.824	.8	.838
Patternmakers.....	.5	1.282	.8	1.059	.4	1.576
Pipefitters.....	.1	.982	.1	.842	.1	1.142
Planer operators.....	2.3	1.006	1.8	.898	2.7	1.061
Repairmen, machine.....	.6	.970	.5	.831	.7	1.048
Screw-machine operators, class A.....	.6	1.161	.3	( <sup>2</sup> )	.8	( <sup>2</sup> )
Screw-machine operators, class B.....	.4	.929	.4	.859	.3	.984
Screw-machine operators, class C.....	.6	.866	.5	.725	.6	.966
Shake-out men.....	.1	.717	.2	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Shaper operators.....	.5	.861	.6	.743	.4	.965
Sheet-metal workers, class A.....	.1	1.119	.1	1.100	( <sup>2</sup> )	( <sup>2</sup> )
Sheet-metal workers, class B.....	.2	.936	.3	.938	.1	.931
Stock clerks.....	3.8	.708	5.1	.638	3.0	.797
Straighteners.....	( <sup>2</sup> )	.998	( <sup>2</sup> )	( <sup>2</sup> )	.1	1.061
Testers, class A.....	.2	1.240	( <sup>2</sup> )	( <sup>2</sup> )	.3	1.259
Testers, class B.....	.1	1.078	( <sup>2</sup> )	( <sup>2</sup> )	.2	1.086
Testers, class C.....	.1	.939	( <sup>2</sup> )	( <sup>2</sup> )	.1	.948
Thread-milling-machine operators.....	.2	1.024	.1	.974	.2	1.045
Time clerks.....	1.3	.690	1.8	.592	1.0	.833
Tool and die makers.....	1.2	1.176	1.0	1.036	1.4	1.253
Tool grinder operators.....	.4	.969	.2	.723	.6	1.049
Truck drivers.....	.2	.823	.2	.733	.2	.892
Truckers, hand.....	1.3	.677	1.8	.634	.9	.742
Truckers, inside.....	.3	.837	.2	.711	.3	.926
Watchmen.....	1.2	.695	1.6	.618	1.0	.784
Welders, hand, class A.....	.2	1.054	.2	1.055	.2	1.053
Welders, hand, class B.....	.1	.860	.1	.880	.1	.840
<b>Females, total.....</b>	1.0	.547	1.8	.543	.4	.561
Assemblers, bench, class C.....	.1	.558	.1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Burrers, class C.....	.1	.558	( <sup>2</sup> )	( <sup>2</sup> )	.1	( <sup>2</sup> )
Drill-press operators, class C.....	( <sup>2</sup> )	.616	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Inspectors, class B.....	.1	.618	.1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Inspectors, class C.....	.2	.485	.3	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Learners, machine operators and others.....	.5	.537	1.3	.548	.3	.468

<sup>1</sup> Averages are based on actual earnings, exclusive of extra payments for overtime.<sup>2</sup> Number of plants and/or workers too small to justify computation of an average.<sup>3</sup> Less than a tenth of 1 percent.

In some occupations the comparative levels of wages of workers in the various classes, for the industry as a whole, are influenced by variations in wage structure. Thus, class C grinding-machine and turret-lathe operators show a higher average than class B operators in the country as a whole, owing to the fact that the former group is found principally in the high-wage midwestern plants. Variations in wage structure resulting from differences in size of plant exercise a similar influence in some cases.

The number of women employed in these plants are insufficient to warrant regional comparisons for individual occupations. The largest single group of women consists of those classified as learners, who received an average of 53.7 cents per hour. The lowest rate is that for class C inspectors who earned 48.5 cents per hour; the rate of 61.8 cents for class B inspectors is the highest for any group of women. The earnings of the grinding-machine, engine-lathe, and milling-machine operators would presumably exceed these, but the data are not adequate to yield statistically reliable averages.

The combined weighted totals shown in table 3 indicate the existence of substantial regional wage differences in this industry. They show a difference of 14.8 cents per hour between the average of 77.6 cents per hour for the 20 plants in the East and that of 92.4 cents for the 26 midwestern establishments. This amount is not, however, to be interpreted as a purely regional difference. Of the 26 midwestern plants, 11 are operating under agreements with nationally affiliated unions, while such agreements are in effect in but 4 of the 20 eastern establishments. On the other hand, the midwestern plants employ only about three-fourths as many workers, on the average, as those in the East. The net effect of these two factors, which tend to offset one another, cannot be precisely stated on the basis of the data available, but there are indications that the 14.8 cents referred to above may overstate somewhat the actual regional difference for types of plants, locations, and types of work.

The regional differences in the averages of male workers in individual occupations are, of course, subject to certain of the qualifications outlined above in connection with the weighted totals. However, the occupational rates for the midwestern plants are almost uniformly above those for the plants in the New England and Middle Atlantic States. In the few exceptions—craters, class B sheet-metal workers, and welders—the numbers of workers or the differences in rates are too small to be considered as highly significant.

Comparable data which are available for 17 important occupational groups indicate that size of plant exercises a considerable effect on earnings. Wages in the large plants are in every instance higher than those in the small, and in 6 of the 17 occupations the difference amounts to more than 20 cents (table 4). This comparison is also influenced somewhat by differences in the extent of unionization and in method of wage payment, but leaves little doubt as to the substantial wage advantage of the workers in large plants.

TABLE 4.—Average Hourly Earnings<sup>1</sup> of Day-Shift Male Workers in Machine-Tool Plants, North Central Region, By Occupation and Size of Plant, April-June 1942

Occupation and class	Average hourly earnings in plants employing—	
	Under 500 workers	500 workers or more
Assemblers, bench, class A.....	\$0.982	\$1.181
Assemblers, bench, class B.....	.812	1.085
Assemblers, bench, class C.....	.642	.869
Drill-press operators, class A.....	.937	1.118
Drill-press operators, class B.....	.775	.962
Drill-press operators, class C.....	.662	.918
Electricians.....	.988	1.047
Inspectors, class A.....	1.055	1.113
Inspectors, class B.....	.861	1.006
Janitors.....	.594	.787
Laborers.....	.628	.829
Lathe operators, engine, class A.....	.969	1.158
Lathe operators, engine, class B.....	.782	.942
Milling-machine operators, class A.....	.951	1.185
Milling-machine operators, class B.....	.730	1.007
Stock clerks.....	.656	.836
Tool and die makers.....	1.163	1.264

<sup>1</sup> Averages are based on actual earnings, exclusive of extra overtime payments.



HOURLY EARNINGS IN PRIVATE SHIPYARDS, 1942<sup>1</sup>*Summary*

IN THE spring of 1942, shortly before the adoption of the new wage-stabilization agreements, the straight-time earnings of first-shift workers in private ship-construction yards averaged 96.0 cents per hour. This average is based on a Bureau of Labor Statistics study of workers in selected occupations in 54 representative ship-construction yards. Comparable average wages by region ranged from \$1.034 per hour on the Pacific coast to 77.6 cents on the Gulf coast. The averages for the Atlantic coast, Great Lakes, and inland regions were 96.6 cents, 86.1 cents, and 79.5 cents, respectively. First-shift workers in 13 ship-repair yards received an average of 97.1 cents per hour.

Among individual occupations, average earnings varied widely. Furnacemen, loftsmen, layers-out, patternmakers, and various supervisory employees were among the highest-paid workers, while laborers, helpers, and learners were among the lowest paid.

Twenty-six separate crafts were generally recognized as coming within the scope of the wage standards established under the stabilization agreements for "first-class skilled mechanics," and several additional crafts were recognized as belonging to this class in one or more individual regions. Only in the Great Lakes region did first-class workers in the 26 crafts commonly receive wages below the minimum. In the inland region, however, no wage minima had been established.

The individual regions varied widely with respect to the proportion of workers carried on the pay roll as "first class." On the Pacific coast, for example, 61 percent of all workers in the 26 recognized crafts were of the first class, whereas only 20 percent were so classified on the Atlantic coast. Differences with regard to the classification of workers profoundly affected general average earnings in the various regions.

*Characteristics of the Industry*

An earlier article discussed the wage structure of the Pacific coast shipbuilding industry.<sup>2</sup> Wage information for that region was released in advance of that for the remainder of the industry in order to make it available for use for a special administrative purpose. The present article gives a detailed analysis of the average hourly earnings, by occupation, of shipyard workers on the Atlantic and Gulf coasts and in the Great Lakes and inland regions. Certain comparisons with Pacific coast wages are also presented.

For purposes of this discussion the shipbuilding industry covers the construction and repair of ships and boats. It is customary to classify ships separately from boats, the basis for classification being size and type of craft. Vessels of 5 gross tons and over are classified as ships, while craft of less than 5 gross tons are classified as boats. The present survey was confined primarily to yards engaged in the construction or repair of ships (5 tons or over). The amount of boatbuilding or repair in these yards was very small.

Ship construction and repair yards are widely scattered along the coasts and inland waterways of the country. Wide variations in wage

<sup>1</sup> Prepared by Willis C. Quant of the Bureau's Division of Wage Analysis. This study was under the joint direction of Victor S. Baril and Edward K. Frazier.

<sup>2</sup> See Monthly Labor Review, August 1942 (pp. 298-305).

levels and in type of construction are found. It follows therefore that any analysis of the wage structure of the industry must make distinction along geographical lines. The broad areas herein adopted coincide with those recognized by the Shipbuilding Stabilization Committee of the National Defense Advisory Commission. These are the Atlantic, Pacific, and Gulf coasts and the Great Lakes. A fifth area, covering small yards in the Ohio-Mississippi Valley, is also distinguished. This area, which in this report will be referred to as the "inland area," was not covered by any wage-stabilization agreement.

The three coastal regions include all yards bordering on the Atlantic and Pacific Oceans and the Gulf of Mexico. The dividing line between the Atlantic and Gulf regions is located a short distance north of the Georgia-Florida State line. Yards bordering on Lakes Michigan, Superior, Huron, and Erie are included in the Great Lakes region, while yards in the Ohio-Mississippi River Valley, excluding southern Louisiana and Mississippi, are in the inland region.

All types of ships, ranging from the larger naval and commercial deep-sea vessels to the smaller harbor craft, are built or repaired in the three coastal areas. Yards on the Great Lakes and at other inland points are necessarily limited to the construction and repair of light vessels, because of the limitations of the inland waterways which connect such yards with the oceans.

Ship construction in all regions is predominantly of metal. Although some wooden vessels are being built in all areas, this type of construction is largely confined to the Gulf coast and Great Lakes regions.

*Occupational patterns.*—Substantial variations in occupational patterns exist as between the various regions, largely as a result of differences in the type and size of ships built, the materials used, and the production processes employed. Quite naturally, more diversification is found in the coastal areas where the larger yards are situated and a wider variety of ships are built than in the Great Lakes and inland areas where the yards are relatively small and the variety of ships is limited. Substantial variations are also found between yards producing metal ships and those producing wooden ships, the latter having a much higher proportion of carpenters and other woodworking occupations than the former. Even in metal-ship yards, production processes may differ considerably. For example, some yards use the welding method of assembly, while others use the older riveting process. Finally, because of the highly diversified nature of repair work as compared to construction work, repair yards generally require a higher proportion of all-round mechanics than do construction yards.

In all regions the majority of the workers are paid on an hourly basis, although substantial proportions of the workers are paid under incentive (bonus and piece work) plans in some regions. Incentive systems are far more extensively used on the Atlantic coast than in any other region. A few workers in each region, mostly draftsmen, are paid on a salary basis.

### *Wage Stabilization*

Early in 1941 a wage-stabilization program was sponsored by the Shipbuilding Stabilization Committee of the National Defense Advisory Commission. The Committee's purpose was to bring about

greater uniformity in rates of pay and to institute a systematic and periodic review of general wage levels in the industry. Following adoption of an agreement covering Pacific coast operations, which became effective April 1, 1941, similar agreements were executed for the Gulf coast, Atlantic coast, and Great Lakes regions. The agreement covering the Great Lakes region became effective June 2, 1941, and those for the Atlantic coast and Gulf coast regions went into effect on June 23 and August 1, 1941, respectively.

These agreements, voluntarily entered into by representatives of both the shipbuilders and the labor organizations, were approved by the Navy, the Maritime Commission, and the Office of Production Management. Although provisions were included for standardization of shifts, for prohibition against strikes and lock-outs, and for other purposes, the primary purpose of the agreements was to standardize wages. Under these agreements the minimum rate for first-class skilled mechanics<sup>3</sup> was set at \$1.12 in the Atlantic, Pacific, and Great Lakes regions, and at \$1.07 in the Gulf region. No definitions of the occupations to be included as "first-class skilled mechanics" were included in the stabilization agreements. The determination of the particular occupations to be affected by the minimum rate, as well as the establishment of rates to be paid other workers, was left to local collective bargaining. Workers in the inland region were not covered by any agreement.

Provisions covering shift differentials were included in all four agreements. The most liberal shift differentials were found in the Pacific coast agreement, which provided that for 7.5 hours of work the second-shift workers should receive 8 hours' pay at the regular hourly rate plus 10 percent, and that for 7 hours of work third-shift workers should receive 8 hours' pay plus 15 percent. On the Gulf coast shift premiums varied, depending on whether two or three shifts were worked. On 2-shift operations, workers on the second shift were paid a premium of 40 cents for each full shift of 8 hours; on 3-shift operations, the same 40-cent differential existed, and in addition second- and third-shift workers were paid for 8 hours although working only 7.5 and 7 hours, respectively. On the Atlantic coast a premium of 7 percent of the established basic rate was paid for work performed on other than the first shift. In the Great Lakes region, workers on other than the first shift received a 40-cent premium for each full shift worked.

All of the agreements provided for extra rates for overtime. In each region time and one-half was paid for all time worked in excess of the standard 8-hour day and the standard 40-hour week, Monday to Friday. All Saturday work was paid for at time and a half, while work performed on Sundays and certain specified holidays was paid for at double time.

The Pacific coast agreement differed from those for other regions in that repair yards were excluded from its provisions.

Each of the regional agreements provided for wage-rate adjustments based on the cost of living at the end of the first year of operation. As each agreement became effective at a different date and the cost of living was rising rapidly and at varying rates in different communities, it became apparent that such adjustments would upset

<sup>3</sup> Mechanics entitled under the agreements to the regional minimum rate are designated as "first-class skilled mechanics" in all regions but the Pacific region, where they are referred to only as "skilled mechanics." In actual practice, Pacific coast shipyards, like those in other regions, have applied the minimum only to first-class skilled mechanics.



the uniformity of minimum rates among regions. To insure continued uniformity in rates a National Shipbuilding Conference<sup>4</sup> was held in May 1942 to consider wage adjustments in all regions. This conference established a uniform minimum wage rate of \$1.20 an hour for all "standard first-class skilled mechanics," thereby eliminating the differential that applied to shipyards in the Gulf region under the first agreement. Rate increases of 8 cents an hour were also provided for others than first-class skilled mechanics, except on the Gulf coast, where the increases ranged from 9 cents for the lowest-paid workers to 13 cents for the highest-paid. These regional adjustments are not reflected in the wage data presented in this report.

Overtime provisions for Saturday and Sunday work were changed to apply to the sixth and seventh consecutive day instead of the calendar day. Holiday work is now paid at the rate of time and a half instead of double time, as provided by the original agreements.

#### WAGE TRENDS

The hourly earnings of shipyard workers have increased sharply since the start of the present war. Average earnings in a number of firms which report regularly to the Bureau advanced from 82.5 cents in September 1939 to \$1.092 in June 1942. During the first year and a half after the war began the increase was gradual, the total rise amounting to about 10 cents. Between May and August 1941, however, hourly earnings advanced by approximately 12 cents. This period coincides with the establishment of zone stabilization agreements in the Atlantic, Gulf, and Great Lakes regions. A further sharp rise was to be expected as the second stabilization agreements became effective in the summer of 1942.

The above averages, it should be mentioned, are influenced to a considerable extent by premium overtime and shift-differential earnings. The average weekly hours for the industry as a whole indicate that considerable overtime is being worked. Likewise, a very substantial portion of the labor force is employed on the second and third shifts at premium rates. Increases in extra payments for overtime and for late-shift work account for part of the gain in average hourly earnings. Earnings are also affected by changes in the composition of the labor force.

#### *Plan of Bureau's Study*

As already noted, detailed wage data were collected from a representative sample of 67 privately operated yards, including 17 on the Pacific coast. Government-operated yards were excluded from the study. In selecting the yards to be studied, careful consideration was given to such factors as size and type of yard, kind of craft under construction, geographical location, and corporate affiliation of the company.

The data used in this analysis were collected by trained field representatives of the Bureau, from pay rolls and other pertinent records. Occupational classifications were checked in each yard in order to insure a uniform basis for analyzing the data.

The figures presented in this report refer only to first-shift workers in occupations which are numerically important or are "key" jobs,

<sup>4</sup> A more detailed analysis of the latest shipbuilding-stabilization agreement was presented in the *Monthly Labor Review* for July 1942 (pp. 85-86).

but the workers covered by this report include approximately 90 percent of all first (day) shift workers employed by the yards surveyed. The average hourly earnings reported include incentive-wage payments but do not take into consideration extra payments made for overtime work.

Although the pay periods studied were scattered throughout a period extended from November 1941 to April 1942, the data represent earnings in the spring of 1942. Some corrections of the data gathered were necessary in isolated instances in order to take account of general wage changes within individual plants between the period covered and April 1, 1942.

### *Hourly Earnings in Spring of 1942, Atlantic Coast*

Traditionally, the Atlantic coast has been the most important site of the shipbuilding industry. Proximity to the most important shipping lanes, to labor markets, and to raw materials, together with the advantage of an early start, have been largely responsible for the concentration of a large part of the industry in this area. During the past 2 years, however, and especially within recent months, the war effort has brought about a rapid expansion of the industry in other areas. Despite this shift, the Atlantic coast region continues to maintain a leading position in the production of ships.

#### LABOR FORCE

The Atlantic coast region, like other areas, has had to recruit large numbers of workers of all skills. The skilled-labor requirements have been met, in part, by drawing upon the reserves of other industries in this industrialized area; by utilizing workers with single operative skills, thereby releasing all-round mechanics for more specialized work and to supervision and instruction; and by expanding the training program. This new approach to the labor-supply problem has enabled the industry to draw upon a large labor market.

New workers in the shipbuilding industry often begin as helpers and ascend the scale to a job as first-class skilled mechanic, through a series of gradations. Consequently there is not much stability in the shipbuilding labor force from the standpoint of occupation and grade.

The occupational pattern among ship-construction yards on the Atlantic coast is more diversified than in any other region. Of the 61 numerically important or "key" occupations studied for the industry as a whole, the Atlantic coast yards reported workers in each, with a substantial number in 29 of the occupations. The largest concentrations of workers are in the occupational groups of laborers (8.2 percent); learners (8.1 percent); and electric welders (6.9 percent). Other groups with relatively large numbers of workers, ranging between 4 and 6 percent of those studied, are shipfitters, shop machinists, electricians, and carpenters.

As has been pointed out in previous reports, many of the shipbuilding occupations include several grades or classifications of workers. In most of the yards, workers above the helper stage are classified as first-class, second-class, or third-class workers or as handymen, depending on their skill and experience. Outside of the first-class group, however, there is little uniformity in classes from one yard to

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another. For this reason it was necessary in the present study to combine into one broad group all classes other than the first class.

Grades or classifications within jobs were found in 32 occupations, which account for, as a group, 54 percent of the workers studied. No such refinement within jobs was found in the remaining 29 occupations, which comprised helpers in the various occupations (16.3 percent), learners and apprentices (10.8 percent), laborers (8.2 percent), supervisory workers (5.3 percent), and other workers (5.7 percent) such as draftsmen, watchmen, guards, etc.

The occupational arrangement in ship-repair yards parallels that of construction yards. Within occupations in which grades are found, however, the proportion of "first-class" workers is on the whole substantially greater than in construction yards. This concentration on "first-class" work is due to the nature of ship-repair work, which is highly diversified and requires a greater proportion of all-round workers. By comparison to construction yards, repair yards had more helpers, but fewer apprentices.

#### HOURLY EARNINGS BY OCCUPATIONS

First-shift workers in the selected occupations in the Atlantic coast construction yards had straight-time earnings averaging 96.6 cents an hour (table 1).<sup>6</sup> This average, however, has only limited significance, because of the wide variation of occupational earnings, which ranged from a low of 63.7 cents for laborers to a high of \$1.503 for foremen.

TABLE 1.—Average Hourly Straight-Time Earnings of Day-Shift Workers in Selected Occupations in Atlantic Coast and Gulf Coast Shipyards, by Region and Type of Yard, Spring of 1942

Occupation	Atlantic coast region				Gulf coast region			
	Construction yards		Repair yards		Construction yards		Repair yards	
	Per- cent of work- ers stud- ied	Aver- age hourly earn- ings <sup>1</sup>	Per- cent of work- ers stud- ied	Aver- age hourly earn- ings <sup>1</sup>	Per- cent of work- ers stud- ied	Aver- age hourly earn- ings <sup>1</sup>	Per- cent of work- ers stud- ied	Aver- age hourly earn- ings <sup>1</sup>
All occupations.....	100.0	\$0.966	100.0	\$0.914	100.0	\$0.776	100.0	\$0.796
Anglesmiths.....	.1	1.142	.2	1.105	.....	.....	.2	.973
First class.....	.1	1.206	.2	1.114	.1	1.050	.1	( <sup>2</sup> )
Other classes.....	( <sup>2</sup> )	.952	( <sup>2</sup> )	( <sup>2</sup> )	.....	.....	.1	( <sup>2</sup> )
Anglesmiths' helpers.....	.1	.724	.2	.880	.....	.....	.1	( <sup>2</sup> )
Apprentices.....	2.7	.691	1.7	.553	12.6	.724	3.9	.752
Blacksmiths.....	.2	1.086	.4	1.082	.3	1.051	.5	1.049
First class.....	.1	1.153	.3	1.152	.3	1.061	.4	1.095
Other classes.....	.1	1.034	.1	.928	( <sup>2</sup> )	( <sup>2</sup> )	.1	( <sup>2</sup> )
Blacksmiths' helpers.....	.3	.849	.5	.768	.2	.617	.2	.660
Boilermakers.....	.7	1.047	1.3	1.045	.3	.974	2.9	.993
First class.....	.1	1.239	.8	1.120	.2	1.075	1.4	1.072
Other classes.....	.6	1.012	.5	.925	.1	.862	1.5	.866
Boilermakers' helpers.....	.7	.757	.7	.708	.7	.612	10.8	.617
Bolters, hand <sup>1</sup> .....	.5	1.257	1.4	.849	.....	.....	.....	.....
First class.....	.3	1.290	.6	.934	.2	.950	.....	.....
Other classes.....	.2	1.208	.8	.777	.....	.....	.....	.....
Burners, acetylene (including gas).....	1.7	1.064	2.5	1.013	2.0	.978	1.2	.989
First class.....	.7	1.151	1.2	1.103	1.2	1.070	.8	1.070
Other classes.....	1.0	1.012	1.3	.924	.8	.843	.4	.851

See footnotes at end of table.

<sup>6</sup> Occupational earnings in the Gulf coast region, discussed below, are also presented in table 1.



TABLE 1.—Average Hourly Straight-Time Earnings of Day-Shift Workers in Selected Occupations in Atlantic Coast and Gulf Coast Shipyards, by Region and Type of Yard, Spring of 1942—Continued

Occupation	Atlantic coast region				Gulf coast region			
	Construction yards		Repair yards		Construction yards		Repair yards	
	Percent of work-ers stud-ied	Aver-age hourly earn-ings <sup>1</sup>	Percent of work-ers stud-ied	Aver-age hourly earn-ings <sup>1</sup>	Percent of work-ers stud-ied	Aver-age hourly earn-ings <sup>1</sup>	Percent of work-ers stud-ied	Aver-age hourly earn-ings <sup>1</sup>
Carpenters (shipwrights)	4.0	\$0.988	5.3	\$1.074	11.4	\$0.949	3.2	\$1.023
First class	1.0	1.100	3.9	1.118	6.7	1.063	2.5	1.070
Other classes	3.0	.948	1.4	.946	4.7	.783	.7	.855
Carpenters' helpers	.8	.731	.6	.732	4.1	.615	2.8	.624
Chippers and caulkers (including foundry chippers)	2.0	1.218	2.2	1.070	1.2	.948	2.1	1.048
First class	.8	1.360	1.6	1.117	.6	1.070	1.8	1.070
Other classes	1.2	1.116	.6	.930	.6	.826	.3	.885
Coppersmiths	.4	1.217	.2	1.097	.1	.980	.4	.963
First class	.2	1.422	.1	1.251	( <sup>2</sup> )	( <sup>2</sup> )	.2	1.105
Other classes	.2	1.047	.1	.904	.1	.893	.2	.773
Coppersmiths' helpers	.3	.766	.3	.723	.1	.624	.1	( <sup>2</sup> )
Crane operators (all types)	1.0	1.056	.3	1.051				
First class	.6	1.137	.2	1.077	.5	1.068	.3	1.086
Other classes	.4	.942	.1	.968				
Draftsmen (senior and junior)	2.2	1.323	.3	1.208	1.2	.711	.8	.860
Drillers (including reamers and counter-sinkers)	.9	1.111	.9	.994				
First class	.5	1.242	.5	1.044	( <sup>2</sup> )	( <sup>2</sup> )	.6	.686
Other classes	.4	.922	.4	.916				
Electricians	4.4	1.047	3.7	1.028	3.7	1.012	7.2	.969
First class	1.1	1.224	2.2	1.118	2.5	1.124	3.8	1.070
Other classes	3.3	.987	1.5	.893	1.2	.780	3.4	.857
Electricians' helpers	2.0	.744	3.0	.740	3.7	.597	4.0	.626
Erectors	.8	1.011						
First class	.2	1.148						
Other classes	.6	.961						
Erectors' helpers	.2	.684						
Foremen (including assistant foremen and quartermen)	2.5	1.503	.6	1.443	1.1	1.234	1.7	1.672
Furnacemen (plate and forge shop)	.2	1.086	.1	1.183	.2	.943		
First class	.1	1.133	( <sup>2</sup> )	( <sup>2</sup> )	.1	1.150		
Other classes	.1	1.039	( <sup>2</sup> )	( <sup>2</sup> )	.1	.685	.1	( <sup>2</sup> )
Handymen, not elsewhere classified	.3	.813	.2	.789				
Helpers, not elsewhere classified	1.0	.740	3.0	.753	( <sup>2</sup> )	( <sup>2</sup> )		
Joiners (including woodworking machine operators)	1.6	1.007	2.7	1.063	1.3	.933		
First class	.5	1.133	1.9	1.118	.7	1.041		
Other classes	1.1	.957	.8	.935	.6	.805		
Joiners' helpers	.6	.725	.3	.744	.1	.550		
Laborers (excluding tank cleaners and janitors)	8.2	.637	10.0	.696	13.9	.499	16.6	.540
Layers-out	.5	1.128			.7	1.014	.1	( <sup>2</sup> )
First class	.2	1.278	.2	1.190	.5	1.079	.1	( <sup>2</sup> )
Other classes	.3	.996			.2	.866	( <sup>2</sup> )	( <sup>2</sup> )
Leaders	2.8	1.307	5.2	1.181	3.1	1.137	4.8	1.116
Learners	8.1	.790			.1	.500		
Loftsmen	.5	1.200	.1	1.192	.3	1.079	.5	1.100
First class	.2	1.348	.1	1.448	.1	1.253	.2	1.280
Other classes	.3	1.084	( <sup>2</sup> )	( <sup>2</sup> )	.2	.978	.3	.920
Machinists, shop	5.3	1.077	3.5	1.060	2.4	.971	3.2	1.034
First class	1.8	1.256	2.2	1.124	1.5	1.048	2.7	1.070
Other classes	3.5	.990	1.3	.953	.9	.855	.5	.845
Machinists' helpers, shop	1.2	.731	1.2	.750	1.4	.605	2.1	.633
Machinists, outside	2.6	1.024	7.3	1.045	1.2	1.020	2.5	1.043
First class	.6	1.171	4.7	1.121	.9	1.070	2.0	1.070
Other classes	2.0	.983	2.6	.903	.3	.874	.5	.935
Machinists' helpers, outside	1.4	.735	2.7	.754	.7	.647	3.7	.634
Molders, foundry	.3	1.136						
First class	.1	1.265	( <sup>2</sup> )	( <sup>2</sup> )			.1	( <sup>2</sup> )
Other classes	.2	1.048						
Painters, brush and spray	3.1	1.074	3.0	.863	2.1	.837	2.6	1.024
First class	1.0	1.204	.5	.919	1.0	1.017	1.7	1.070
Other classes	2.1	1.012	2.5	.853	1.1	.674	.9	.939
Patternmakers	.2	1.318			( <sup>2</sup> )	( <sup>2</sup> )		
First class	.1	1.327	.1	1.280	( <sup>2</sup> )	( <sup>2</sup> )	.1	( <sup>2</sup> )
Other classes	.1	1.297			( <sup>2</sup> )	( <sup>2</sup> )		

See footnotes at end of table.

TABLE 1.—Average Hourly Straight-Time Earnings of Day-Shift Workers in Selected Occupations in Atlantic Coast and Gulf Coast Shipyards, by Region and Type of Yard, Spring of 1942—Continued

Occupation	Atlantic coast region				Gulf coast region			
	Construction yards		Repair yards		Construction yards		Repair yards	
	Per- cent of work- ers stud- ied	Aver- age hourly earn- ings <sup>1</sup>	Per- cent of work- ers stud- ied	Aver- age hourly earn- ings <sup>1</sup>	Per- cent of work- ers stud- ied	Aver- age hourly earn- ings <sup>1</sup>	Per- cent of work- ers stud- ied	Aver- age hourly earn- ings <sup>1</sup>
Pipefitters (including plumbers)	3.4	\$1.050	3.7	\$1.034	2.7	\$0.983	2.8	\$1.042
First class	.9	1.201	2.1	1.118	1.6	1.066	2.5	1.070
Other classes	2.5	.999	1.6	.931	1.1	.868	.3	.820
Pipefitters' helpers (including plumbers' helpers)	2.5	.754	3.5	.744	3.9	.615	4.1	.643
Plate-shop machine operators	.6	1.044	.3	.947	.3	.915	1.6	.774
First class	.2	1.160	.2	1.060	.1	1.056	.4	1.070
Other classes	.4	1.005	.1	.823	.2	.788	1.2	.685
Plate-shop machine operators' helpers	1.2	.754	.2	.732	.2	.634	1.7	.606
Regulators	.2	1.029						
First class	.1	1.148	(2)	(2)	.2	.950	.2	1.103
Other classes	.1	.935						
Riggers, ship	1.2	1.049	2.8	.955	.6	.975		
First class	.4	1.161	.9	1.119	.3	1.067	.1	(2)
Other classes	.8	1.002	1.9	.878	.3	.910		
Riggers, yard and crane	.8	.882	3.2	.876	1.8	.839	1.1	.795
First class	.2	.978	3.1	.879	.4	.997	.3	.930
Other classes	.6	.858	.1	.801	1.4	.798	.8	.754
Rivet heaters	.4	.973	.7	.865	(2)	(2)	.5	.713
Rivet holders-on	.4	1.196	.4	1.111	.1	.660	.6	.734
Rivet passers	.3	.909	.4	.765			.7	.685
Riveters	.5	1.348	1.7	1.142	.4	1.056		
First class	.2	1.498	1.6	1.151	.4	1.070	.4	1.174
Other classes	.3	1.261	.1	.924	(2)	(2)		
Sheet-metal workers (including tinsmiths)	3.0	1.077	1.5	.944	.4	.956	1.0	.936
First class	.6	1.302	.4	1.115	.2	1.038	.4	1.087
Other classes	2.4	1.013	1.1	.881	.2	.850	.6	.818
Sheet-metal workers' helpers	1.4	.779	1.5	.709	.2	.620	1.5	.645
Shipfitters	5.8	1.015	2.2	.969	3.6	.947	1.1	.920
First class	.9	1.169	.8	1.128	1.8	1.061	.4	1.101
Other classes	4.9	.988	1.4	.885	1.8	.834	.7	.804
Shipfitters' helpers	2.4	.743	2.6	.746	6.1	.587	.4	.609
Stage builders	.9	.877	.2	.812				
Tank cleaners			(2)	(2)				
Toolmakers and diemakers	.1	1.105						
First class	(2)	1.255	(2)	(2)				
Other classes	.1	1.030						
Tracers	.2	.691	(2)	(2)	(2)	(2)	.1	(2)
Watchmen and guards	1.0	.660	4.7	.746	1.9	.507	1.2	.450
Welders, acetylene (including gas)	.2	1.196	.3	1.119				
First class	.1	1.241	.3	1.135	(2)	(2)		
Other classes	.1	1.112	(2)	(2)				
Welders, electric	6.9	1.148	3.2	1.018	4.0	.968		
First class	1.3	1.445	1.8	1.090	2.5	1.061	1.5	1.091
Other classes	5.6	1.079	1.4	.925	1.5	.814		
Welders' helpers, electric	.2	.713	1.0	.739	2.6	.625		

<sup>1</sup> Excluding earnings resulting from extra pay for overtime work.<sup>2</sup> Less than a tenth of 1 percent.<sup>3</sup> Number of workers too small to justify computation of average.<sup>4</sup> Includes a small number of machine bolters.

Nearly two-fifths (38.7 percent) of the first-shift workers were in jobs that had straight-time earnings averaging \$1.00 or more per hour and somewhat over one-fifth (22.5 percent) were in occupations which averaged \$1.12 or more per hour. On the other hand, a fourth of the workers (27.0 percent), most of whom were helpers, averaged between 68 and 80 cents per hour.

First-class workers averaged \$1.12 or more per hour in all but two occupations—yard and crane riggers (97.8 cents), and carpenters (\$1.10). The former generally were not considered to be skilled

mechanics, and the latter, although generally paid the minimum, received lower rates in a few yards. Little uniformity in earnings was found in the various groups designated as "other classes." These groups, which comprise second- and third-class craftsmen and handymen in their respective occupations, had earnings ranging from 92.2 cents for drillers to \$1.116 for chippers and caulkers.

The variations in earnings in ship-construction yards on the Atlantic coast are due not only to different wage policies, but also to differences in the composition of the labor force, the type of ships built, and the size and location of the yards.

The average earnings of first-class craftsmen and helpers are less affected than the "other classes" by differences in composition of the labor force among yards. Included in the groups designated as "other classes" are varying proportions of second- and third-class workers and handymen. This results in some differences in the averages for workers in the "other classes," among occupations which might be expected to have similar rates of pay. The average earnings of all the workers are somewhat affected by size of yard. Large yards as a whole in this region pay rates averaging about 9 cents an hour more than the small yards.

One of the most important factors making for dissimilarity in the occupational averages on the Atlantic coast is the widespread use of incentive methods of pay. Nearly 45 percent of all the workers were paid on an incentive basis and the hourly earnings of these workers averaged 18.5 percent more than their guaranteed base rates. Incentive premiums accounted for about 8 percent of the earnings of all workers in the region as a whole.

The significance of the incentive payments is clearly reflected in the average hourly earnings of such occupations as riveters, electric welders, and chippers and caulkers. The first-class craftsmen in each of the three occupations averaged more than leaders (\$1.307) and almost as much as foremen (\$1.503). Incentive premiums accounted for more than 25-percent of the average hourly earnings of these first-class workers.

Substantial variations in occupational earnings are found from yard to yard, although within a given yard (except for variations resulting from incentive earnings) the averages are fairly uniform. The variations from one yard to another are clearly brought out by the following figures for typical occupations. Each figure represents the average for an individual yard:

	First class	Other classes
Chippers and caulkers.....	\$0. 610-\$2. 037	\$0. 894-\$1. 699
Electricians.....	. 625- 1. 470	. 720- 1. 135
Sheet-metal workers.....	. 780- 1. 532	. 704- 1. 333
Shop machinists.....	. 840- 1. 554	. 641- 1. 156
Electric welders.....	. 800- 2. 002	. 720- 1. 275

Within the above extremes, it should be noted, first-class workers in most of the yards are paid rates approaching the minimum of the zone standard.

In ship-repair yards on the Atlantic coast, workers averaged 91.4 cents an hour, or 5.2 cents less than workers in ship-construction yards. This difference was due, not primarily to lower wage scales, but rather to the relative infrequency of incentive-wage payment in the repair yards.



The highest-paid workers in the repair yards were first-class loftsmen, who averaged \$1.448 an hour. First-class workers in several other occupations, normally considered highly skilled, also had averages above that for leaders (\$1.181 an hour). Apprentices (55.3 cents), and laborers (69.6 cents), totaling 11.7 percent of all the ship-repair workers studied in this area, earned least. Helpers generally averaged between 70 and 76 cents an hour.

#### APPLICATION OF THE STABILIZATION AGREEMENT

The actual effect of the first Atlantic coast stabilization agreement upon the earnings of ship-construction workers can be appraised, in part, from the averages presented in table 1. The agreement established a minimum rate of \$1.12 an hour for standard first-class skilled mechanics. The average earnings for first-class workers indicate that 29 occupations included skilled mechanics, apparently deemed to be subject to the agreed hourly minimum. These occupations were as follows:

Anglesmiths	Machinists, shop
Blacksmiths	Molders, foundry
Boilermakers	Painters, brush and spray
Burners, acetylene	Patternmakers
Carpenters (shipwrights)	Pipefitters
Chippers and caulkers	Plate-shop machine operators
Coppersmiths	Regulators
Crane operators	Riggers, ship
Electricians	Riveters
Erectors	Sheet-metal workers
Furnacemen	Shipfitters
Joiners	Tool and die makers
Layers-out	Welders, acetylene
Loftsmen	Welders, electric
Machinists, outside	

The occupations listed above are almost identical with those found to have first-class workers subject to the hourly minimum on the Pacific coast. The only important difference is that first-class regulators are not considered as subject to the \$1.12 rate on the Pacific coast. In addition, machine bolters, reported separately on the Pacific coast, have not been distinguished from hand bolters on the Atlantic coast; the work done by erectors in the latter region is performed by shipfitters in the West coast yards.

Of the listed occupations only one, carpenters (shipwrights), included first-class mechanics averaging less than \$1.12 an hour. Even these workers were generally paid the established minimum, and their low average (\$1.10) was the result of substandard wages in a few yards constructing wooden ships, which employed relatively large numbers of carpenters.

Table 1 also reveals that supervisory workers, draftsmen, and a few other occupational groups averaged more than the established minimum for first-class mechanics. Foremen and leaders have been excluded from the list of "first-class skilled mechanics," as they generally are expected to be paid more than their subordinates. Draftsmen usually are not assigned a "class," but are paid on the basis of individual ability. Hand bolters, drillers, and rivet holders-on have also been excluded from the list on the ground that incentive rates rather than application of the minimum rate account for the high averages in these occupations. The basic hourly rates in these occupations were typically below \$1.12.

In the repair yards 21 occupations showed averages of \$1.09 or more per hour for first-class workers. Although the hourly averages for a few of these occupations were somewhat below the minimum of \$1.12, most yards paid at least the minimum rate to first-class mechanics.

### *Hourly Earnings in Spring of 1942, Gulf Coast*

The shipbuilding industry on the Gulf coast was not of great significance prior to the beginning of the Nation's defense program. Gulf coast operations, however, have expanded rapidly during recent months and this region now contributes greatly to the national shipbuilding program.

The recent expansion has necessitated the recruiting and training of large numbers of new workers. The greater part of the recruits, mostly unskilled, have come from nearby farms, lumber camps, and other industries of the deep South. Some skilled workers also were drawn from more distant points. The latter generally supplemented the regular force of skilled mechanics in supervising and instructing the workers of less skill, or in performing specialized duties.

As indicated in table 1, the workers in Gulf coast ship-construction yards were found in 53 occupational groups, the larger of which were apprentices, carpenters (shipwrights), and laborers. These three occupations account for nearly two-fifths (37.9 percent) of all ship-construction workers studied in this region. Yards constructing ships primarily of wood, employing one-fourth of all the workers studied, had large numbers of carpenters and laborers. Many apprentices were reported by yards constructing metal ships, where extensive training programs were in use.

In general, workers engaged in ship repairing are similarly distributed among the various occupations. The most notable exceptions were a larger proportion of both laborers and helpers, and a smaller proportion of apprentices and learners. Apparently informal advancement, rather than apprenticeship, is used more extensively in the repair yards than in the construction yards.

#### OCCUPATIONAL EARNINGS

The straight-time earnings of day-shift workers in ship-construction yards in the Gulf coast region averaged 77.6 cents an hour (table 1). This average represents occupational earnings extending over a wide range—from 49.9 cents for laborers to \$1.253 for first-class loftsmen.

Nearly 25 percent of the workers were in occupations or "classes" averaging \$1.05 or more an hour, i. e., approaching or exceeding the minimum for first-class mechanics in this region (\$1.07). Well over half (55.0 percent), mostly helpers, laborers, and apprentices, were in occupations for which the average was less than 75 cents an hour.

All first-class workers, excepting yard and crane riggers, hand bolters, and regulators, averaged more than \$1.00 an hour in their respective occupations. Among the second- and third-class craftsmen and handymen, who for the purpose of this study are grouped as "other classes," only furnacemen (68.5 cents) and painters (67.4 cents) averaged less than 75 cents an hour. The remaining occupational groups of "other classes" of workers had average hourly earnings between 75 cents and \$1.00. Helpers in the various crafts averaged less than 65 cents an hour.

Occupational averages among yards were affected in varying degree by the lower wage scales for the construction of wooden ships. The yard averages for first-class electricians, ranging from 99 cents to \$1.375, and those ranging from 40 cents to 54 cents for laborers, illustrate the typical variations in the earnings of workers in the same occupation and class. Within the same yard, however, little difference in earnings was noted among workers in the same job.

Ship-repair workers on the Gulf coast as a group averaged 79.6 cents an hour. The highest wages were paid to foremen, who averaged \$1.672. Watchmen and guards earned the least, an average of 45.0 cents an hour.

The occupational averages presented fell into three major groups. The highest averages ranged upward from \$1.07 an hour and included only first-class craftsmen and supervisory workers. This group represent about one-third of all the workers studied. One-sixth of the workers, mostly "other classes" of craftsmen, averaged between 75 cents and \$1.00 an hour. The remaining half of the workers, primarily laborers and helpers to the various craftsmen, had average earnings of less than 75 cents an hour.

#### OCCUPATIONS SUBJECT TO MINIMUM RATE

Examination of the data for ship-construction yards presented in table 1 indicates that approximately the same occupations in the Gulf coast region as in the Atlantic coast region were interpreted to be subject to the minimum wage for "first-class skilled mechanics" (\$1.07). An outstanding exception existed in the case of regulators, who averaged only 95.0 cents an hour. In a number of other occupations, particularly joiners, shop machinists, painters, and sheet-metal workers, the average was slightly below \$1.07; this was due exclusively to the influence of a few low-wage yards, in spite of general observance of the minimum.

The hourly averages for first-class mechanics in ship-repair yards followed a pattern generally similar to that in ship-construction yards.

#### *Hourly Earnings in Spring of 1942, Great Lakes*

On the Great Lakes the shipbuilding industry formerly was confined to small yards engaged in building and repairing lake cargo vessels, tugs, and wooden pleasure craft. Almost all of these yards have now been converted to the construction of smaller war craft, and have increased their labor forces greatly.

As may be seen from table 2, ship-construction carpenters and their helpers accounted for 21 percent of all workers studied in the Great Lakes yards. The relatively high proportion of such craftsmen was due in large measure to the construction of wooden vessels and to the lack of differentiation among crafts. About half of all the workers in yards building wooden ships consisted of carpenters and their helpers.



TABLE 2.—Average Hourly Straight-Time Earnings of Day-Shift Workers in Selected Occupations in Great Lakes and Inland Shipyards, by Region and Type of Yard, Spring of 1942

Occupation	Great Lakes region				Inland region	
	Construction yards		Repair yards		Construction yards	
	Percent of workers studied	Average hourly earnings <sup>1</sup>	Percent of workers studied	Average hourly earnings <sup>1</sup>	Percent of workers studied	Average hourly earnings <sup>1</sup>
All occupations.....	100.0	\$0.861	100.0	\$1.013	100.0	\$0.795
Anglesmiths.....	.3	.900			.2	( <sup>2</sup> )
First class.....	.1	( <sup>2</sup> )			.1	( <sup>2</sup> )
Other classes.....	.2	.875			.1	( <sup>2</sup> )
Anglesmiths' helpers.....	.3	.707				
Apprentices.....	.1	( <sup>2</sup> )	.5	.755	1.0	.646
Blacksmiths.....	.6	.969	.5	1.110	.6	.960
First class.....	.3	1.035	.4	1.120	.4	1.012
Other classes.....	.3	.902	.1	( <sup>2</sup> )	.2	( <sup>2</sup> )
Blacksmiths' helpers.....	.7	.751	.8	.813	.7	.609
Boilermakers.....	.1	( <sup>2</sup> )	.2	( <sup>2</sup> )		
First class.....	.1	( <sup>2</sup> )	.1	( <sup>2</sup> )		
Other classes.....	( <sup>3</sup> )	( <sup>2</sup> )	.1	( <sup>2</sup> )		
Boilermakers' helpers.....			1.3	.821		
Bolters, hand.....	3.0	.741	8.1	.979		
First class.....	.7	.780	6.7	1.021		
Other classes.....	2.3	.730	1.4	.780		
Burners, acetylene (including gas).....	1.8	.908	2.6	1.141	1.4	.854
First class.....	1.0	1.069	2.4	1.158	.2	( <sup>2</sup> )
Other classes.....	.8	.829	.2	( <sup>2</sup> )	1.2	.844
Carpenters (shipwrights).....	14.7	.983	3.2	1.095	3.9	.926
First class.....	7.9	1.085	2.3	1.120	2.3	1.004
Other classes.....	6.8	.863	.9	1.032	1.6	.817
Carpenters' helpers.....	6.3	.711	2.8	.840	.5	.702
Chippers and caulkers (including foundry chippers).....	2.3	.975	2.7	1.113	1.5	.901
First class.....	1.4	1.091	1.6	1.179	.5	.925
Other classes.....	.9	.792	1.1	1.010	1.0	.890
Coppersmiths.....	.1	( <sup>3</sup> )				
First class.....	.1	( <sup>2</sup> )				
Other classes.....	( <sup>3</sup> )	( <sup>2</sup> )				
Coppersmiths' helpers.....	.2	.778				
Crane operators (all types).....	.8	1.000	1.1	1.152	1.4	.957
First class.....	.4	.991	.9	1.167	.6	.925
Other classes.....	.4	1.010	.2	( <sup>2</sup> )	.8	.983
Draftsmen (senior and junior).....	3.0	.933			2.0	1.360
Drillers (including reamers and countersinkers).....	.5	.810	1.8	1.010		
First class.....	.2	.850	1.6	1.019		
Other classes.....	.3	.783	.2	( <sup>2</sup> )		
Electricians.....	2.9	.985	3.3	1.135	2.7	.913
First class.....	1.0	1.119	2.2	1.203	.7	1.015
Other classes.....	1.9	.912	1.1	1.005	2.0	.876
Electricians' helpers.....	1.4	.734	1.1	.806	1.3	.669
Erectors.....	1.9	.810				
First class.....	.2	1.010				
Other classes.....	1.7	.781	1.1	1.030		
Erectors' helpers.....	2.9	.645	.4	.830		
Foremen (including assistant foremen and quartermen).....	2.3	1.282	1.4	1.495	.9	1.176
Furnacemen (plate and forge shops).....	.3	.829	.5	1.056		
First class.....	.2	.850	.2	( <sup>2</sup> )	.1	( <sup>2</sup> )
Other classes.....	.1	( <sup>2</sup> )	.3	1.030		
Helpers, not elsewhere classified.....	1.5	.709			1.6	.575
Joiners (including woodworking machine operators).....	.7	1.033				
First class.....	.5	1.091	.2	( <sup>2</sup> )		
Other classes.....	.2	.875				
Joiners' helpers.....	.2	.670	.1	( <sup>2</sup> )		
Laborers (excluding tank cleaners and janitors).....	6.5	.575	7.0	.939	18.9	.583
Layers-out.....	.2	.930			2.2	.984
First class.....	.2	.973	.4	1.350	.7	1.162
Other classes.....	( <sup>3</sup> )	( <sup>2</sup> )			1.5	.895
Leaders.....	2.4	1.173	6.3	1.288	2.2	.993
Learners.....	3.6	.700	.6	.906	2.4	.645
Loftsmen.....	.3	.980			.9	1.123
First class.....	.2	1.052	.2	( <sup>2</sup> )	.7	1.175
Other classes.....	.1	( <sup>2</sup> )			.2	( <sup>2</sup> )

See footnotes at end of table.

TABLE 2.—Average Hourly Straight-Time Earnings of Day-Shift Workers in Selected Occupations in Great Lakes and Inland Shipyards, by Region and Type of Yard, Spring of 1942—Continued

Occupation	Great Lakes region				Inland region	
	Construction yards		Repair yards		Construction yards	
	Percent of workers studied	Average hourly earnings <sup>1</sup>	Percent of workers studied	Average hourly earnings <sup>1</sup>	Percent of workers studied	Average hourly earnings <sup>1</sup>
Machinists, shop	4.9	\$0.959	1.4	\$1.066	3.7	\$0.991
First class	1.7	1.076	.9	1.120	1.8	1.097
Other classes	3.2	.898	.5	.981	1.9	.894
Machinists' helpers, shop	1.5	.723	.4	.760	1.1	.554
Machinists, outside	1.0	1.008	1.6	1.034	3.0	1.005
First class	.5	1.135	1.2	1.120	1.6	1.047
Other classes	.5	.902	.4	1.022	1.4	.958
Machinists' helpers, outside	.4	.706	1.1	.850	2.2	.625
Painters, brush and spray	2.8	.762	1.3	1.178	2.4	.816
First class	.9	.984	1.2	1.186	.8	.810
Other classes	1.9	.657	.1	( <sup>2</sup> )	1.6	.819
Patternmakers, first class	.8	1.317				
Pipefitters (including plumbers)	1.9	1.066	3.0	1.085	2.7	.939
First class	1.4	1.124	1.9	1.120	.9	.989
Other classes	.5	.917	1.1	1.027	1.8	.914
Pipefitters' helpers (including plumbers' helpers)	1.4	.687	4.9	.828	.9	.651
Plate-shop machine operators	.6	.885	1.7	1.091	1.3	.916
First class	.3	.870	.5	1.075	.7	.858
Other classes	.3	.900	1.2	1.097	.6	.991
Plate-shop machine operators' helpers	.6	.640	3.5	.834	1.3	.612
Regulators—						
First class	.2	.860				
Other classes			1.1	.800		
Riggers, ship					.2	( <sup>2</sup> )
First class	.7	.943	.1	( <sup>2</sup> )	.1	( <sup>2</sup> )
Other classes					.1	( <sup>2</sup> )
Riggers, yard and crane	1.0	.794	3.6	.987	1.1	.750
First class	.7	.796	2.9	1.007	.5	.831
Other classes	.3	.788	.7	.900	.6	.668
Rivet heaters	.2	.780	1.7	.876	.1	( <sup>2</sup> )
Rivet holders-on	.3	.920	2.2	.962		
Rivet passers	.2	.653	3.8	.708		
Riveters			2.1	1.158		
First class	.7	1.115	2.0	1.161	.1	( <sup>2</sup> )
Other classes			.1	( <sup>2</sup> )		
Sheet-metal workers (including tinsmiths)	.4	.914	1.2	1.145	1.1	1.016
First class	.2	.935	1.0	1.173	.2	( <sup>2</sup> )
Other classes	.2	.893	.2	( <sup>2</sup> )	.9	.963
Sheet-metal workers' helpers	.7	.690	.2	( <sup>2</sup> )	.2	( <sup>2</sup> )
Shipfitters	3.1	.945	1.7	1.196	7.7	.882
First class	1.2	1.110	.9	1.395	1.8	1.042
Other classes	1.9	.838	.8	.997	5.9	.834
Shipfitters' helpers	3.9	.683	1.6	.833	6.8	.572
Stage builders			4.1	1.030		
Tank cleaners					.1	( <sup>2</sup> )
Tracers	.8	.737			.2	( <sup>2</sup> )
Watchmen and guards	1.6	.561	1.7	.793	2.1	.613
Welders, acetylene (including gas), first class	.1	( <sup>2</sup> )	.4	1.120		
Welders, electric	7.3	.984	6.6	1.139	15.2	.874
First class	3.2	1.094	6.1	1.148	6.1	1.038
Other classes	4.1	.898	.5	1.030	9.1	.763
Welders' helpers, electric	1.0	.668	.8	.850	.1	( <sup>2</sup> )

<sup>1</sup> Excluding earnings resulting from extra pay for overtime work.<sup>2</sup> Number of workers too small to justify computation of average.<sup>3</sup> Less than a tenth of 1 percent.

## HOURLY EARNINGS

The day-shift workers in the ship-construction yards studied in the Great Lakes region had average straight-time earnings of 86.1 cents an hour. Of the occupations for which figures are presented, first-class patternmakers earned the highest wages, averaging \$1.317 an hour, and watchmen and guards the lowest, 56.1 cents. Only a fourth (27.1 percent) of the workers surveyed were in occupations that

averaged more than \$1.00 an hour; first-class workers predominated in this group. Another quarter, comprised primarily of groups designated as "other classes," averaged between 80 cents and \$1.00 per hour. Rates averaging less than 75 cents an hour were paid to two-fifths of the workers, most of whom were helpers.

The wage rates paid in a few of the yards were considerably below those prevailing in the region. For example, although most first-class carpenters were paid \$1.12 an hour, individual yard averages ranged as low as 88.6 cents. Rates ranging from 85.0 cents to \$1.12 per hour for first-class electric welders were also found in this region. Generally, the lower rates were found in yards engaged in wooden-ship construction, although some of these yards paid rates comparable to those in metal-ship construction.

Little variation in rates prevailed in the same occupation and grade within a given yard. No incentive-payment systems were in effect in the ship-construction yards studied.

The average hourly earnings of first-class skilled mechanics engaged in ship construction in this region did not appear generally to conform to the zone standard minimum rate of \$1.12 an hour. In only six occupations did first-class workers have average hourly earnings of \$1.11 or more. However, as has been suggested above, the lower averages for first-class workers in certain other occupations resulted from the payment of rates below the zone standard in only a few yards, rather than to a general disregard of the \$1.12 minimum.

In repair yards the averages by occupation were generally higher than in construction yards, ranging from \$1.495 for foremen to 70.8 cents for rivet passers. As a whole, ship-repair workers averaged \$1.013 an hour. Of the 21 groups of first-class workers for which figures are presented, 16 showed hourly earnings averaging \$1.12 or more. Although a few workers were paid under incentive plans, such premium earnings had little effect upon the averages as a whole.

### *Hourly Earnings in Spring of 1942, Inland Region*

Prior to the launching of the Nation's war program, ship construction in river ports of the Ohio-Mississippi system was generally confined to vessels used in commercial transportation on the rivers. Today, however, the products of these yards also include vessels used in coastal defense.

Large numbers of workers have been recruited from the surrounding area to meet the demands for ships. These recruits are being largely trained under an informal program, as is indicated by the high proportion of helpers and laborers. The latter, alone, represent nearly a fifth of all the workers surveyed. The prevalence of welded construction accounts for a relatively large proportion of electric welders. On the whole, the occupational pattern is somewhat simpler than that found in other regions.

#### OCCUPATIONAL AVERAGES

The average hourly straight-time earnings of the day-shift workers studied was 79.5 cents for the region as a whole (table 2). Among the occupations for which averages are presented, draftsmen were paid the highest rates, averaging \$1.36 an hour, and machinists



helpers the lowest, averaging 55.4 cents. Laborers and first-class workers each accounted for a fifth of all the workers surveyed.

About one-half of the workers studied were in occupations averaging less than 80 cents an hour. Laborers and various craft helpers comprised most of these workers. Exactly 19 percent of all workers were in occupations averaging more than \$1.00 an hour.

Typical of the variety of rates paid among yards for the same type of work are the ranges of yard averages for first-class electric welders (\$1.21 to 95.0 cents), laborers (76.3 to 39.8 cents), and shipfitters' helpers (89.9 to 55.0 cents). Incentive systems of pay, affecting about one-seventh of the workers, also influenced the averages of some occupations.

Wages in the inland area have not been stabilized under a zone standard agreement. This fact is reflected in the lower rates for first-class workers, as only four such groups averaged above \$1.07, the lowest minimum rate established for first-class skilled mechanics in any of the other regions.

### Interregional Comparisons

Comparisons of the wage information presented in the earlier article, previously mentioned, and in the preceding pages for each region separately are given below. A summary comparison of combined averages for the selected occupations shown in tables 1 and 2 appears in the accompanying statement. It reveals that the weighted average hourly earnings for construction yards in the United States as a whole was 96.0 cents. The average for repair yards was 97.1 cents.

Pacific coast wages were considerably higher than those in any other region. In new construction the Atlantic coast ranked second, while the Great Lakes region ranked second in wage rates for ship repair work. In both branches of the industry wages on the Gulf coast were the lowest.

	Construction yards	Repair yards
United States.....	\$0. 960	\$0. 971
Pacific.....	1. 034	1. 166
Gulf.....	. 776	. 796
Atlantic.....	. 966	. 914
Great Lakes.....	. 861	1. 013
Inland.....	. 795	-----

A comparison of wage levels by occupation, such as is given in table 3, presumes identical or nearly identical duties from region to region. The Bureau's agents took particular care to obtain comparable data and it is felt that, for the most part, the indications of this table are dependable. Although differences in method of construction and type of ships slightly affected the duties of some of the occupations reported in this study, the jobs are reasonably similar among regions.

The occupational comparisons in table 3 are limited to new construction work, which constitutes a major part of the entire industry. This table includes all occupations which employ workers in all of the regions, and gives averages for 39 entire occupations, regardless of the "class" of workers included; it also presents comparisons for first-class workers alone.

With regard to the general occupational averages, it is of interest to note that the Pacific coast pays the highest wages in 33 occupations

out of the 39. Of the 6 remaining occupations the Atlantic coast ranks first in 5, while the inland region has the highest average for 1 occupation (draftsmen). In terms of first-class mechanics' wages, however, the Atlantic coast occupies the top position. In 17 of the 21 groups for which data are given Atlantic coast wages are highest, while the Pacific coast ranks first in only 4 cases.

TABLE 3.—Average Hourly Straight-Time Earnings of Day-Shift Workers in Selected Occupations in Ship-Construction Yards by Region, Spring of 1942

Occupation and class	Pacific coast	Gulf coast	Atlantic coast	Great Lakes	Inland
<i>All classes</i>					
Anglesmiths.....	\$1.267	\$1.050	\$1.142	\$0.900	(1)
Blacksmiths.....	1.132	1.051	1.086	.969	\$0.960
Blacksmiths' helpers.....	.873	.617	.849	.751	.600
Burners, acetylene (including gas).....	1.116	.978	1.064	.968	.854
Carpenters (shipwrights).....	1.121	.949	.988	.983	.926
Carpenters' helpers.....	.870	.615	.731	.711	.702
Chippers and caulkers (including foundry chippers).....	1.100	.948	1.218	.975	.901
Crane operators (all types).....	1.191	1.068	1.056	1.000	.957
Draftsmen (senior and junior).....	1.116	.711	1.323	.933	1.390
Electricians.....	1.133	1.012	1.047	.985	.913
Electricians' helpers.....	.871	.597	.744	.734	.609
Foremen (including assistant foremen and quartermen).....	1.421	1.234	1.503	1.282	1.176
Furnacemen (plate and forge shops).....	1.232	.943	1.086	.829	(1)
Helpers, not elsewhere classified.....	.860	(1)	.740	.709	.575
Laborers (excluding tank cleaners and janitors).....	.797	.499	.637	.575	.563
Layers-out.....	1.235	1.014	1.128	.930	.984
Leaders.....	1.263	1.137	1.307	1.173	.993
Loftsmen.....	1.229	1.079	1.200	.980	1.123
Machinists, shop.....	1.120	.971	1.077	.959	.991
Machinists' helpers, shop.....	.867	.605	.731	.723	.554
Machinists, outside.....	1.122	1.020	1.024	1.008	1.005
Machinists' helpers, outside.....	.870	.647	.735	.706	.625
Painters, brush and spray.....	1.123	.837	1.074	.762	.816
Pipefitters (including plumbers).....	1.118	.983	1.050	1.066	.939
Pipefitters' helpers (including plumbers' helpers).....	.870	.615	.754	.687	.651
Plate-shop machine operators.....	1.061	.915	1.044	.885	.916
Plate-shop machine operators' helpers.....	.877	.634	.754	.640	.612
Riggers, ship.....	1.130	.975	1.049	.943	(1)
Riggers, yard and crane.....	1.065	.839	.882	.794	.750
Rivet heaters.....	1.000	(1)	.973	.780	(1)
Riveters.....	1.122	1.056	1.348	1.115	(1)
Sheet-metal workers (including tinsmiths).....	1.080	.956	1.077	.914	1.016
Sheet-metal workers' helpers.....	.872	.620	.779	.690	.780
Shipfitters.....	1.090	.947	1.015	.945	.882
Shipfitters' helpers.....	.870	.587	.743	.683	.572
Tracers.....	.831	.467	.691	.737	(1)
Watchmen and guards.....	.808	.507	.660	.561	.613
Welders, electric.....	1.122	.968	1.148	.984	.874
Welders' helpers, electric.....	.869	.625	.713	.668	(1)
<i>First class</i>					
Anglesmiths.....	1.267	1.050	1.296	(1)	(1)
Blacksmiths.....	1.151	1.061	1.153	1.035	1.012
Burners, acetylene (including gas).....	1.123	1.070	1.151	1.069	(1)
Carpenters (shipwrights).....	1.128	1.063	1.100	1.085	1.004
Chippers and caulkers (including foundry chippers).....	1.123	1.070	1.360	1.091	.925
Crane operators (all types).....	1.191	1.068	1.137	.991	.925
Electricians.....	1.140	1.124	1.224	1.119	1.015
Furnacemen (plate and forge shops).....	1.232	1.150	1.133	.850	(1)
Layers-out.....	1.235	1.079	1.278	.973	1.162
Loftsmen.....	1.254	1.253	1.348	1.052	1.175
Machinists, shop.....	1.128	1.048	1.256	1.076	1.067
Machinists, outside.....	1.127	1.070	1.171	1.135	1.047
Painters, brush and spray.....	1.123	1.017	1.204	.984	.810
Pipefitters (including plumbers).....	1.122	1.066	1.201	1.124	.989
Plate-shop machine operators.....	1.118	1.056	1.160	.870	.858
Riggers, ship.....	1.130	1.067	1.161	.943	(1)
Riggers, yard and crane.....	1.065	.997	.978	.706	.831
Riveters.....	1.122	1.070	1.498	1.115	(1)
Sheet-metal workers (including tinsmiths).....	1.129	1.038	1.302	.935	(1)
Shipfitters.....	1.121	1.061	1.169	1.110	1.042
Welders, electric.....	1.127	1.061	1.445	1.094	1.038

<sup>1</sup> Number of workers too small to justify computation of average.

These apparently contradictory measures of relative wage levels are easily reconcilable. The wages of first-class mechanics in the Atlantic coast region are indeed high for the shipbuilding industry, but only a small proportion of the workers in this region are recognized as first class. The large numbers of second- and third-class craftsmen and handymen drag down the combined averages below the levels prevailing on the Pacific coast, where most craftsmen are considered as first class.

The inland region paid the lowest wages in 19 of the 39 groups. It also ranks low as regards earnings of first-class craftsmen.

#### STABILIZATION IN OPERATION

Despite the rather general terminology of the stabilization agreements, the four regions concerned have shown considerable uniformity in determining to which occupations the minimum wage should be applied. The fifth, the inland region, has not been faced with this problem, as no agreement has been adopted there.

A review of the occupational rates in the four largest regions appears to justify the designation of 26 separate crafts as generally coming within the scope of the zone standards.<sup>6</sup> It is unnecessary to list these here since, with three exceptions, they are identical with the 29 crafts listed earlier in connection with the discussion of Atlantic coast wages. The three exceptions are erectors, painters, and regulators; first-class workers in these jobs customarily receive at least the minimum rate in the Atlantic region, but fail to attain the minimum generally throughout the industry. Erectors, it may be mentioned, are not distinguished from shipfitters in some regions.

The Pacific coast list, presented in the earlier article, is also closely similar to the industry-wide list of 26 crafts, requiring only the elimination of painters and machine bolters. On the Pacific coast machine bolters are sharply distinguished from hand bolters and receive higher wages, but in other regions both groups commonly receive the same rate, which for first-class workers is below the minimum.

A number of the 26 occupations are not represented in the Gulf region, or are not distinguished from other, similar jobs. All of the occupations with substantial representation, however, appear generally to carry the minimum wage; in a few cases the averages are slightly below \$1.07 an hour, owing to substandard wage rates in a few yards.

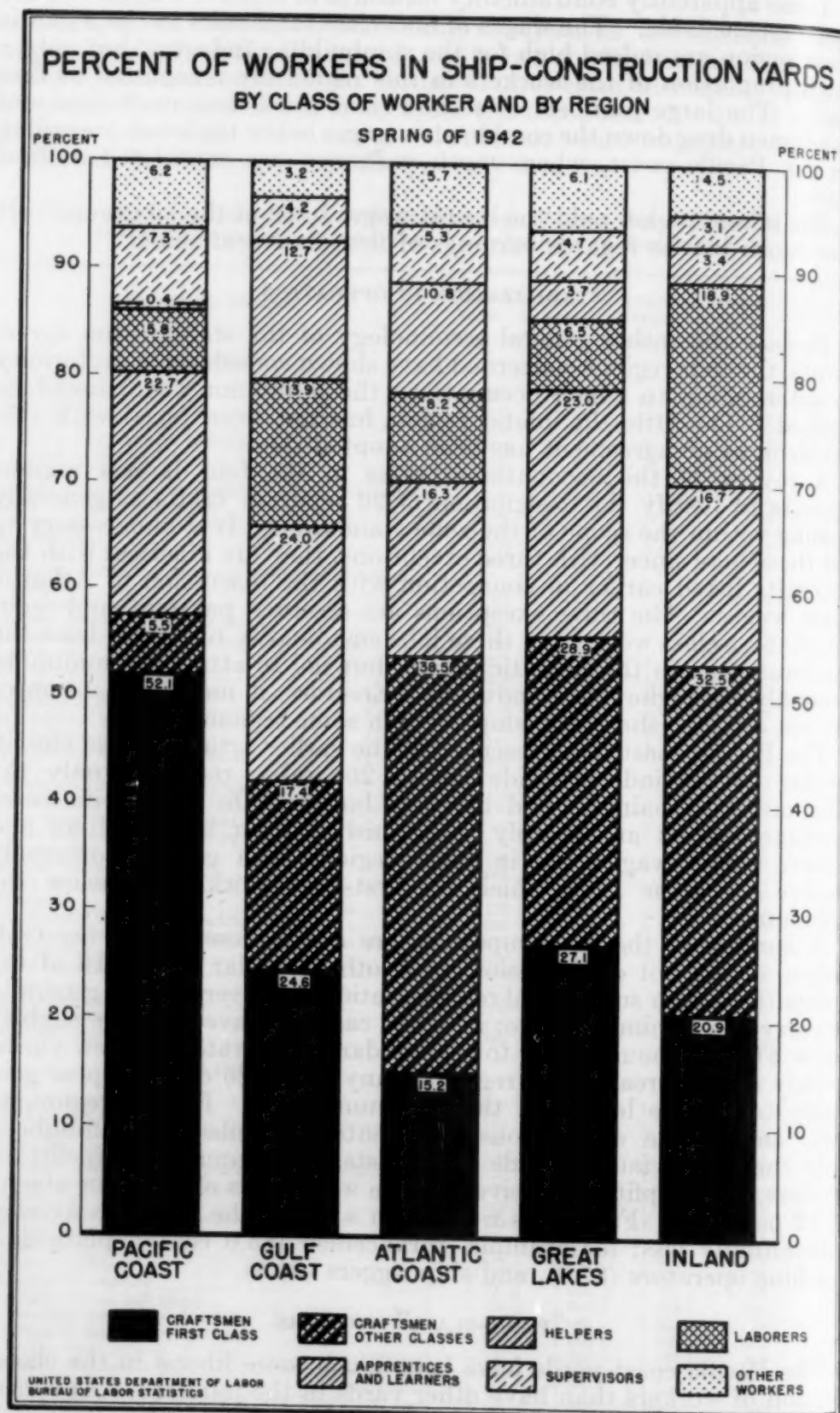
Only in the Great Lakes region do any of the 26 crafts appear generally to receive less than the minimum wage. In this region, in fact, among the occupations represented in substantial numbers, only the electricians, outside machinists, patternmakers, pipefitters, riveters, and shipfitters receive average wage rates close to (or above) \$1.12 per hour. First-class workers in some of the 26 crafts average substantially less; for example, furnacemen (85.0 cents), plate-shop machine operators (87.0), and ship riggers (94.3).

#### "FIRST-CLASS" WORKERS

The Pacific coast yards have been much more liberal in the classification of workers than have other yards in the industry. Advance-

<sup>6</sup> It should be mentioned again that supervisory workers and certain other special groups (such as draftsmen) have been intentionally excluded from consideration, even though they commonly receive wages higher than the minimum rates.





ment has been rapid and almost automatic on the Pacific coast, whereas in the other regions upgrading is sometimes irregular and may involve long delay. The proportion of first-class workers in the Pacific coast region is consequently much higher than elsewhere.

Of all the day-shift workers (including helpers) in the 26 crafts within the scope of the zone standards in Pacific coast yards, fully 61 percent were carried on the pay roll as first-class workers at the time of the Bureau's study. In the Atlantic coast yards, in which classification standards appear to be most strict, the corresponding percentage was only 20. The percentages for the other regions were as follows: Gulf coast, 37; Great Lakes, 35; and inland, 30.

Many jobs in the industry, of course, are not appropriate for the establishment of classes; the proportions of first-class craftsmen among all workers are consequently smaller than those given above. In the accompanying chart all first-shift employees in the various regions are segregated by class or type of job. For purposes of this chart, the craftsmen referred to include workers in all crafts, without reference to the minimum wage. Again the Pacific coast ranks first in proportion of first-class craftsmen and the Atlantic coast last. The proportion of learners and apprentices is particularly high in both the Gulf and Atlantic coast regions. Laborers comprise a relatively large part of the workers in the Gulf coast and inland areas.

## EARNINGS IN MINING AND PROCESSING OF NONFERROUS METALS, JUNE 1942 <sup>1</sup>

### Summary

FROM August 1941 to June 1942 average earnings in the three branches of the nonferrous-metals industry increased by amounts ranging from 6.7 to 11.3 cents an hour. In June 1942 earnings per hour averaged 84.1 cents in the mining and milling of copper, 84.3 cents in the extraction of lead and zinc, and 88.0 cents in other nonferrous mills and mines. The corresponding averages in August 1941 were 72.8, 76.6, and 77.4 cents.

The information for the later date was obtained in a recent survey by the Bureau of Labor Statistics, in order to bring up to date information previously obtained in a field study the results of which were published in the *Monthly Labor Review*, issues of June, July, and August 1942. The information essential to the revision of the 1941 data was obtained by mail from the firms which provided data for the earlier survey. The adjustments made were restricted primarily to general wage increases; increases limited to specific occupational groups were considered only when they were of sufficient magnitude to affect appreciably the average hourly earnings of the plants involved.

In view of the fact that the most recent study of this industry did not involve the collection of complete pay-roll data, it was impossible to make any revisions in the gross weekly earnings which appeared in the 1941 tabulations. Schedules of hours of work have changed decidedly in many establishments, especially in the mines. A considerable number of mining firms, for example, reported a change in the weekly hours of work from 40 to 48, or from 42 to 48. These changes also substantially affected overtime hours and punitive overtime earnings.

The response to the Bureau's inquiries regarding recent wage changes by firms engaged in the mining and smelting of mercury was inadequate. Since it was impracticable in the time available to send field representatives to the small and scattered mercury plants, it was found necessary to abandon the presentation of statistics for this branch of the industry. The total number of workers previously surveyed in mercury mining (444) and smelting (135) was small, however, and the effect of their omission on average hourly earnings in the industry as a whole is insignificant.

Except for the omission of the mercury operations, the establishments included in the present tabulations are identical with those studied in 1941 and are believed to be representative of the respective branches of the industry. The occupational patterns presented are representative primarily of the August 1941 period, since the adjustments made applied only to wage rates and not to changes in occupational structure. Significant shifts in occupational patterns may have taken place as a result of the increase in output for war purposes.

The data on average hourly earnings refer essentially to straight-time earnings, since extra earnings derived from overtime have been

<sup>1</sup> Prepared in the Bureau's Division of Wage Analysis by Harry Ober with the assistance of Fred W. Mohr and Abner C. Lakenan.



eliminated from all of the wage averages presented. Premiums for evening and night shifts are not an important factor in mining and milling or in smelting and refining. With regard to other characteristics of the data (the analysis of the sample, the background of the industry, the characteristics of the labor force, and relevant wage and hour practices) the findings of the 1941 survey, published in the June and July (1942) issues of the Monthly Labor Review, provide a considerable amount of information which applies equally to the present data.

*Wage changes from August 1941 to June 1942.*—With few exceptions, the wage increases which were granted by individual firms between August 1941 and June 1942 were general increases covering all plant employees. Where some occupational groups in a given plant were paid on a time basis and others on a piece-rate basis, the piece rates were generally raised by approximately the same percentage as were the hourly rates. Over and above the general increases, specific occupational groups sometimes received additional increases, especially the workers in the mechanical and maintenance occupations.

Establishments reporting to the Bureau regarding wage changes during the 10-month period numbered 75 in mining and milling and 34 in smelting and refining. Of the mining and milling establishments 12 reported that they granted no wage increases; 28 had granted increases of less than 15 percent; and the remaining 35 reported increases of 15 percent or more. In the smelting and refining of non-ferrous metals 6 establishments reported no increases, 24 reported increases of less than 15 percent, and the remaining 4 reported increases of 15 percent or more.

### *Average Hourly Earnings in June 1942*

Average hourly earnings were generally higher in June 1942 than in August 1941 (table 1). Workers engaged in the mining and milling of copper in June 1942 earned an average of 84.1 cents per hour; those in the extraction of lead and zinc, 84.3 cents; and those in other mines and mills 88.0 cents. The respective averages for these three industry branches in August 1941 were 72.8 cents, 76.6 cents, and 77.4 cents an hour. On a relative basis, workers in copper mines and mills received the greatest increase, amounting to 15.5 percent on the average; while those in lead and zinc mines and mills received the smallest average increase, amounting to 10.1 percent. Employees engaged in other mining and milling received wage increases averaging 13.7 percent.

In smelting and refining operations the increases were, on the whole, somewhat lower than in mining and milling, and ranged from 4.0 cents per hour in lead smelting to 9.1 cents in copper smelting. Average hourly earnings in the three major smelting branches—copper, lead, and zinc—amounted to 84.1 cents, 80.8 cents and 90.1 cents, respectively, in June 1942. Workers engaged in the electrolytic refining of copper and in electrolytic zinc production earned on the average 83.9 cents and 89.0 cents during the same period. On a relative basis, the increases in average hourly earnings in these various branches of smelting and refining ranged from 5.2 percent in lead smelters to 12.1 percent in copper smelters.

TABLE 1.—Straight-Time Average Hourly Earnings in Nonferrous-Metals Industry, by Branch, August 1941 and June 1942

Branch of industry	Average hourly earnings		Increase, August 1941 to June 1942	
	August 1941	June 1942	Amount	Percent
Mining and milling of—			Cents	
Copper.....	\$0. 728	\$0. 841	11. 3	15. 5
Lead and zinc.....	. 766	. 843	7. 7	10. 1
Other.....	. 774	. 880	10. 6	13. 7
Smelting of—				
Copper.....	. 750	. 841	9. 1	12. 1
Lead.....	. 768	. 808	4. 0	5. 2
Zinc.....	. 835	. 901	6. 6	7. 9
Electrolytic refining of copper.....	. 779	. 839	6. 0	7. 7
Electrolytic zinc production.....	. 809	. 890	8. 1	10. 0

The distribution of workers by average hourly earnings in the various segments of the nonferrous-metals industry shows a decided shift of workers into the higher earnings brackets. In mining and milling in the United States as a whole, for example, only 1 worker in 7 had earnings of 90 cents or more in August 1941, whereas 1 worker in every 3 had such earnings in June 1942 (table 2). The highest proportion of workers (42.0 percent) found in this earnings class was in the mining and milling of the minor metals.

TABLE 2.—Percentage Distribution of Workers in Nonferrous-Metals Industry by Average Hourly Earnings and Branch, June 1942

## MINES AND MILLS

Average hourly earnings	Total	Copper mines and mills	Lead and zinc mines and mills	Other mines and mills <sup>1</sup>
Under 40.0 cents.....	0. 2	( <sup>2</sup> )	0. 3	.....
40.0 and under 42.5 cents.....	. 1	( <sup>2</sup> )	. 1	0. 5
42.5 and under 45.0 cents.....	. 3	0. 6	. 1	.....
45.0 and under 47.5 cents.....	. 5	. 6	. 3	. 1
47.5 and under 50.0 cents.....	. 2	. 3	. 2	. 1
50.0 and under 52.5 cents.....	1. 1	1. 8	. 5	. 1
52.5 and under 55.0 cents.....	. 7	1. 2	. 2	. 2
55.0 and under 57.5 cents.....	1. 6	2. 9	. 4	. 1
57.5 and under 60.0 cents.....	1. 9	2. 8	. 7	3. 7
60.0 and under 62.5 cents.....	3. 0	5. 2	1. 0	1. 1
62.5 and under 65.0 cents.....	2. 4	2. 9	1. 9	3. 2
65.0 and under 67.5 cents.....	2. 2	2. 0	2. 3	2. 9
67.5 and under 70.0 cents.....	2. 4	1. 7	3. 2	. 8
70.0 and under 72.5 cents.....	3. 0	2. 3	3. 7	3. 1
72.5 and under 75.0 cents.....	4. 7	2. 4	7. 6	. 2
75.0 and under 77.5 cents.....	4. 7	3. 0	7. 0	. 9
77.5 and under 80.0 cents.....	6. 6	5. 7	8. 0	2. 2
80.0 and under 82.5 cents.....	9. 8	5. 5	14. 1	10. 0
82.5 and under 85.0 cents.....	10. 6	12. 9	8. 8	4. 0
85.0 and under 87.5 cents.....	5. 0	6. 1	4. 2	1. 3
87.5 and under 90.0 cents.....	6. 0	4. 7	5. 4	23. 5
90.0 and under 92.5 cents.....	5. 9	4. 4	7. 6	4. 8
92.5 and under 95.0 cents.....	5. 2	6. 1	4. 6	3. 7
95.0 and under 97.5 cents.....	5. 3	7. 0	3. 4	6. 4
97.5 and under 100.0 cents.....	2. 6	3. 9	1. 5	. 6
100.0 and under 105.0 cents.....	5. 3	4. 2	4. 8	20. 4
105.0 and under 110.0 cents.....	3. 5	3. 5	3. 6	3. 5
110.0 cents and over.....	5. 2	6. 3	4. 5	2. 6
Total.....	100. 0	100. 0	100. 0	100. 0
Number of workers.....	25, 761	12, 358	12, 065	1, 338
Number of units <sup>3</sup> .....	144	36	91	17
Average hourly earnings, June 1942.....	\$0. 844	\$0. 841	\$0. 843	\$0. 880

See footnotes at end of table.

TABLE 2.—Percentage Distribution of Workers in Nonferrous-Metals Industry by Average Hourly Earnings and Branch, June 1942—Continued

## SMELTING AND REFINING

Average hourly earnings	Smelting			Copper refining (electrolytic)	Electrolytic zinc production <sup>4</sup>
	Zinc	Copper	Lead		
Under 37.5 cents	( <sup>2</sup> )		0.1		
37.5 and under 40.0 cents	0.1				
40.0 and under 42.5 cents			.1	( <sup>2</sup> )	0.1
42.5 and under 45.0 cents	.1	0.1		0.1	
45.0 and under 47.5 cents	( <sup>2</sup> )	( <sup>2</sup> )	.3	.2	.1
47.5 and under 50.0 cents	( <sup>2</sup> )	( <sup>2</sup> )	.6	( <sup>2</sup> )	.2
50.0 and under 52.5 cents	.2	.1		2.9	.5
52.5 and under 55.0 cents	.1	1.3	.4	1.5	
55.0 and under 57.5 cents	.1	1.1		1.6	
57.5 and under 60.0 cents	.1	.3	.2	1.4	.5
60.0 and under 62.5 cents	.1	.7		1.5	
62.5 and under 65.0 cents	.2	2.9	10.0	.7	.1
65.0 and under 67.5 cents	2.3	2.5	6.6	.5	
67.5 and under 70.0 cents	4.4	2.5	4.0	.5	.9
70.0 and under 72.5 cents	3.3	4.2	4.4	.7	3.3
72.5 and under 75.0 cents	8.4	2.8	2.8	5.5	1.9
75.0 and under 77.5 cents	3.2	2.9	6.5	3.0	2.2
77.5 and under 80.0 cents	4.9	18.0	10.1	13.7	5.8
80.0 and under 82.5 cents	4.7	8.9	13.3	12.0	12.3
82.5 and under 85.0 cents	6.3	9.5	12.4	13.0	9.6
85.0 and under 87.5 cents	3.5	3.5	6.5	7.8	5.4
87.5 and under 90.0 cents	7.4	12.0	2.0	5.8	8.8
90.0 and under 92.5 cents	8.6	3.7	5.9	5.1	6.3
92.5 and under 95.0 cents	7.4	7.6	2.3	5.2	17.4
95.0 and under 97.5 cents	4.6	3.1	4.8	2.9	7.4
97.5 and under 102.5 cents	10.2	4.7	1.6	5.5	7.0
102.5 and under 107.5 cents	8.3	3.1	1.6	3.5	6.7
107.5 and under 112.5 cents	5.0	1.4	.4	2.1	.6
112.5 and under 117.5 cents	3.0	1.5	.5	1.1	2.0
117.5 cents and over	3.5	1.6	2.6	2.2	.9
Total	100.0	100.0	100.0	100.0	100.0
Number of workers	7,983	4,366	1,095	6,785	1,323
Number of units	14	9	4	8	4
Average hourly earnings, June 1942	\$0.901	\$0.841	\$0.808	\$0.839	\$0.890

<sup>1</sup> Manganese, molybdenum, and tungsten.<sup>2</sup> Less than a tenth of 1 percent.<sup>3</sup> Total of mines and mills, not entire establishments.<sup>4</sup> Includes 1 lead refinery.

Similar changes in the distributions of individual earnings occurred in the smelting and refining of all major nonferrous metals. The most marked change in the distribution of earnings took place in electrolytic zinc production and in zinc smelting; in both branches about one-half of the workers earned 90 cents per hour or more in June 1942, while only three-tenths of the zinc smelting workers and one-tenth of electrolytic-zinc workers were in this earnings class in August 1941.

## OCCUPATIONAL AVERAGES

In table 3 are presented data on average hourly earnings by occupation for each of the branches of mining and milling and of smelting and refining. For convenience in presentation, the data for several branches have been combined. The occupations listed are not intended to present the occupational pattern for each branch of the industry but show the various average wages by occupation. In mining and milling the occupational pattern does not vary appreciably with the type of metal mined or milled. In smelting and refining, however, there is a decided difference in the occupational pattern from branch to branch, and only a few occupations, notably various



categories of yard and transportation labor and the maintenance occupations, recur in all of these branches.

TABLE 3.—*Straight-Time Average Hourly Earnings of Workers in Nonferrous-Metals Industry, by Branch, Occupation, and Region, June 1942*

## MINING

Occupation	Copper			Lead and zinc			Other <sup>1</sup>
	South-west	North-west	Michi-gan	West	Tri-State district	East	
All occupations.....	\$0. 858	\$0. 926	\$0. 595	\$0. 874	\$0. 814	\$0. 857	\$0. 887
Blacksmiths.....	. 920	. 938	. 552	. 912	. 822	. 908	. 903
Helpers.....	. 775	. 847	. 518	. 833	. 720	( <sup>2</sup> )	
Boilermakers.....	. 977	. 967					
Cagers.....				. 877	. 850	. 810	
Helpers.....	( <sup>2</sup> )	. 841	( <sup>2</sup> )	. 819	. 841	( <sup>2</sup> )	
Cagers, inside.....	. 933	. 897	( <sup>2</sup> )				
Carpenters.....	. 944	. 991	. 579	. 918	. 876	. 822	
Change-house men.....	. 661	. 773	. 496	. 767	. 757	. 733	
Clean-up men.....							. 734
Clerical workers:							
Office.....	. 960	. 912	( <sup>2</sup> )	. 987	. 838	. 856	
Plant.....	. 986	. 950	( <sup>2</sup> )	. 994	. 745	. 779	
Common laborers.....	. 626	. 788	. 537	. 772	. 695	. 638	
Compressor operators.....	. 842	. 969	. 531	. 881	. 804	( <sup>2</sup> )	
Drilling-machine operators.....	. 961	1. 038	. 656	. 919	. 924	1. 011	. 959
Helpers.....	. 766	. 890	( <sup>2</sup> )	. 791	. 746	. 908	. 830
Electricians.....	. 960	. 979	. 564	. 954	. 879	. 875	
Firemen, railroad.....	. 818	. 898	( <sup>2</sup> )				
Foremen and assistants, working.....	. 976	1. 044	. 697				. 998
Foremen and assistants, working, maintenance.....				1. 017	. 870	. 965	
Hoistmen, surface.....	. 889	. 952	. 547	. 883	. 825	. 752	
Hoistmen, underground.....	. 889	. 967	( <sup>2</sup> )	. 898	. 781	. 652	
Hoistmen, surface and underground.....							. 818
Laborers, maintenance.....	. 619	. 787					
Loading-machine operators.....	. 941	. 932		. 857	1. 010	. 773	. 997
Maintenance workers, not elsewhere classified.....				. 894	. 818	. 981	. 983
Helpers.....	. 770	. 867	. 549	. 806	. 640	. 832	
Mechanics.....	. 939	. 975	. 566	. 931	. 849	. 823	. 904
Miners, hand.....							. 847
Miscellaneous maintenance workers, n. e. c.....	. 873	. 980	. 549				
Miscellaneous workers.....	. 830	. 850	. 459	. 853	. 766	. 825	. 874
Motormen.....	. 934	. 861	. 629	. 869	. 923	. 813	. 900
Helpers.....	. 835	. 848		. 840	. 764	. 703	. 830
Muckers.....	. 822	. 825	. 579	. 802	. 778	. 723	
Nippers.....	. 729	. 842	. 620	. 830	( <sup>2</sup> )	( <sup>2</sup> )	
Oilers.....	. 807	. 815	. 510				
Pipefitters.....	. 919	. 922	( <sup>2</sup> )	. 879	. 800		
Helpers.....	. 801	. 861	( <sup>2</sup> )				
Powdermen (blasting).....	. 875	. 933					
Power and transportation workers.....	. 887	. 980	. 542				
Powerhouse operators' helpers.....	. 836	. 887	( <sup>2</sup> )				
Pumpmen.....	. 801	. 918	. 549	. 912	. 776	. 758	
Pumpmen, surface and underground.....							. 894
Repairmen, maintenance.....					. 869	( <sup>2</sup> )	
Repairmen, mine.....				. 916	( <sup>2</sup> )	. 964	
Repairmen, mine and surface.....	( <sup>2</sup> )	. 877	( <sup>2</sup> )				
Roustabouts.....	. 688	. 849	( <sup>2</sup> )	. 795	. 750	. 631	. 871
Samplers, ore.....	( <sup>2</sup> )	. 800	( <sup>2</sup> )				
Shovel operators.....	1. 151	1. 147					
Storekeepers (powder).....	. 859	. 863	( <sup>2</sup> )				
Technicians.....				1. 029	1. 011	( <sup>2</sup> )	
Technicians and supervisory workers.....	1. 107	. 907	( <sup>2</sup> )				
Timbermen.....	. 972	. 853	. 575	. 884		. 963	. 886
Helpers.....				. 869		( <sup>2</sup> )	
Timekeepers.....	. 989	. 971	( <sup>2</sup> )				
Tool and powder storeroom men.....				. 868	( <sup>2</sup> )	( <sup>2</sup> )	
Trackmen.....	. 842	. 815	. 554	. 815	. 816	. 749	
Trammers.....	. 723		. 542	. 813	. 746	. 787	
Truck and tractor operators.....	. 897	. 916	( <sup>2</sup> )	. 861	. 699	( <sup>2</sup> )	
Watchmen.....	. 750	. 752	( <sup>2</sup> )	. 763	. 679	( <sup>2</sup> )	

<sup>1</sup> Manganese, molybdenum, and tungsten.

<sup>2</sup> Too few workers to permit computation of average.

TABLE 3.—Straight-Time Average Hourly Earnings of Workers in Nonferrous-Metals Industry, by Branch, Occupation, and Region, June 1942—Continued

## MILLING

Occupation	Copper		Lead and zinc			Other <sup>1</sup>
	North-west	South-west	West	Tri-State district	East	
All occupations.....	\$0.929	\$0.788	\$0.821	\$0.778	\$0.827	\$0.863
All-round mill-machinery operators.....						.771
Ball-mill operators.....	1.020	.790	.787	.785	.790	.948
Carpenters.....	1.000	.986	.926	.842	.857	
Clerical workers.....	1.010	.912				.066
Office.....			.881	.684	.794	
Plant.....			1.032	.744	( <sup>2</sup> )	
Crusher operators.....	.880	.789	.799	.740	.766	.840
Electricians.....	1.022	1.010	.952	.840	( <sup>2</sup> )	
Flotation operators.....	.912	.833	.849	.812	.822	.846
Foremen and assistants, working.....			.948	.958	.968	1.011
Foremen's assistants, working.....	1.050	.869				
Foremen, working.....	1.060	.991				
General helpers, mill.....	.849	.683	.745	.720	.678	.820
Jig operators.....			.788	.796	.839	
Laborers, maintenance.....	.844	.644	.775	.652		
Laborers, mill.....			.737	( <sup>2</sup> )	( <sup>2</sup> )	
Maintenance helpers, n. e. c.....	.880	.720	.813	.770	.859	
Maintenance workers, n. e. c.....	1.029	.832	.966	.866	.972	.922
Mechanics.....	1.007	.930	.885	.824	.956	.930
Miscellaneous workers, n. e. c.....	.934	.813	.852	.721	.833	.860
Oilers and greasers.....	.802	.736				
Oilers, machinery.....			.802	( <sup>2</sup> )	.903	
Ore handlers.....	.888	.707	.755	.714	.731	.822
Plant protection and custodial workers.....	.760	.669	.759	.637	.768	
Power and transportation workers.....			.872	.927	.988	
Repairmen.....	.924	.807				
Samplers.....	.878	.765	.784	.765	.723	.856
Swingmen.....						.723
Table men.....						.825
Truck drivers.....	.945	.812	.880	.879	( <sup>2</sup> )	

## SMELTING AND REFINING

Occupation	Smelting			Electro-lytic copper refining	Electro-lytic production of zinc
	Copper	Zinc	Lead		
All occupations.....	\$0.841	\$0.901	\$0.808	\$0.839	\$0.890
Air hoistmen.....				.823	
Apprentices.....	.781				
Apprentices, craft.....		.871			
Apprentices, trade or craft.....				.716	
Bag-house men.....			.842		
Helpers.....		.925			
Binmen's helpers.....		.696			
Blacksmiths.....	.947	.998		1.016	
Helpers.....		.855		.854	
Blast-furnace chargers.....			.863		
Blast-furnace operators.....			.919		
Blast-furnace tappers.....			.830		
Blow-out men.....		.866			
Boilermakers.....	.932		.947	.962	
Helpers.....	.834			.827	
Brakemen, railroad.....		.905		.814	
Bricklayers.....		1.122		1.087	
Helpers.....		.787		.803	
Bumpers.....		.977			
Cadmium operators.....		.970			
Carpenters.....	.984	.974	.899	1.008	.956
Helpers.....		.788			
Casters and pourers.....					.945
Casting-machine operators.....	.876	.913	.992	.905	
Cellar men.....		.853			
Chamber men.....		1.058			
Helpers.....		.949			
Chargers.....		.985			

<sup>1</sup> Manganese, molybdenum, and tungsten.<sup>2</sup> Too few workers to permit computation of average.

TABLE 3.—Straight-Time Average Hourly Earnings of Workers in Nonferrous-Metals Industry, by Branch, Occupation, and Region, June 1942—Continued

## SMELTING AND REFINING—Continued

Occupation	Smelting			Electrolytic copper refining	Electrolytic production of zinc
	Copper	Zinc	Lead		
Checkers		\$0. 870		\$0. 780	
Chemists					\$1. 040
Chemists' assistants		. 960			. 821
Chemists and metallurgists		. 914			
Chippers, billet				. 841	
Chisellers (condensor cleaners)		. 920		. 849	
Circulation men, tanks				. 796	
Clay mixers					. 799
Clerical, office workers	\$0. 853		\$0. 931		
Clerical, other plant and office workers		. 972			
Clerical, plant workers	. 990	. 973	1. 023	. 891	. 822
Concentrator operators				. 847	
Helpers				. 796	
Condensor setters		. 904			
Connie boys (condensor cleaners)		. 886			
Converter-furnace operators	. 927				
Converter-furnace punchers	. 818				
Conveyor operators	. 758	. 733	. 791		
Cottrell operators	. 869	. 979			
Helpers	. 860				
Cranemen		. 917		. 870	
Helpers				. 788	
Cranemen, overhead	. 917		. 828		
Helpers	. 816				
Crusher operators		. 905			
Drivers (team, truck, tractor)		. 870			
Dryer operators		. 893			
Dumpmen	. 792				
Electricians	1. 000	1. 042		. 999	
Helpers		. 828			
Electrolytic tank operators				. 876	. 959
Engineers, powerhouse		1. 051		1. 079	
Engineers, railroad	. 972	1. 033		. 903	
Fire and fuel men, powerhouse		. 911			
Firemen, machines and boilers		. 833			
Firemen, powerhouse	. 837			. 865	
Firemen, railroad		. 873			
Flappers				. 706	
Flue dust men	. 778				
Foremen and assistants, working	1. 002	1. 033	. 891		
Foremen, working				1. 010	
Foremen, assistants, working				. 915	
Furnace chargers (reverberatory)				. 948	
Furnace operators					. 991
Helpers					. 934
Furnace operators (gross and byproducts)		. 855			
Furnace operators, miscellaneous, n. e. c.				. 821	
Helpers				. 844	
Furnace operators, refining				. 924	
Helpers				. 873	
Furnace operators (reverberatory and refining)				. 923	
Helpers				. 812	
Furnace men, retort		1. 081			
Furnace men, helpers		. 907			
Furnace operators' helpers, all-round	. 856				
Furnace skimmers				. 797	
Furnace tappers				. 951	
Gas-producer operators		1. 014			
Helpers		. 975			
Helpers, powerhouse		. 986			
Hookers, shovelers (furnace cleaning)		. 917			
Hot-sheet men				. 848	
Inspectors (billet, wire bars, etc.)		1. 127		. 822	
Ironworkers				1. 013	
Janitors	. 765	. 768	. 758	. 750	. 785
Kilnmen		. 842			
Laborers, furnace	. 764	. 795	. 837	. 697	
Laborers, maintenance	. 713			. 747	
Laborers, n. e. c.					. 786
Laborers, process	. 750	. 794	. 757	. 730	. 788
Laborers, samplers				. 756	
Laborers, yard	. 750		. 712	. 750	. 785
Laborers, yard and maintenance		. 776			
Laboratory helpers		. 683			
Ladle men's helpers				. 744	

<sup>3</sup> Average for June 1942 lower than average for August 1941, owing to a change in the method of calculating hours of work for some workers in zinc smelting.



TABLE 3.—Straight-Time Average Hourly Earnings of Workers in Nonferrous-Metals Industry, by Branch, Occupation, and Region, June 1942—Continued

## SMELTING AND REFINING—Continued

Occupation	Smelting			Electro-lytic copper refining	Electro-lytic production of zinc
	Copper	Zinc	Lead		
Leach operators.....				\$0. 875	
Leacher operators.....		\$0. 943			
Lead burners.....	\$1. 397	1. 267			
Helpers.....	. 780	. 910			
Loaders.....		. 943			
Loaders and unloaders.....				. 777	
Locomotive crane engineers.....	. 928				
Loopers and punchers.....				. 899	
Machine repairmen.....					\$0. 962
Helpers.....					. 826
Machinists.....	. 986	1. 047	\$0. 865	1. 024	
Helpers.....		. 806		. 834	
Maintenance laborers.....			. 664		
Maintenance workers, n. e. c.....			. 824	. 923	
Helpers.....			. 799	. 794	
Maintenance and service workers, n. e. c.....		. 964			
Helpers.....		. 795			
Mechanics.....		. 926		. 900	
Helpers.....		. 863			
Metal drawers.....		. 989			
Metal handlers.....	. 782				
Metal handlers and loaders.....		. 992			
Metal handlers (car loaders).....				. 791	
Mill operators, crush and grind.....	. 880	. 817	. 764		
Helpers.....	. 750	. 813			
Mill operators, n. e. c.....					. 899
Helpers.....					. 840
Mill workers, miscellaneous, n. e. c.....				. 814	
Helpers.....				. 833	
Miscellaneous mill workers, n. e. c.....	. 846				
Helpers.....	. 808				
Mixer (pug-mill) operators.....		. 905			
Mixing-machine (pottery) operators.....		. 920			
Mold changers.....				. 810	
Mold coolers.....				. 808	
Mold fishers.....				. 880	
Mold painters, greasers, sprayers.....				. 862	
Motormen, tram.....		. 858			
Motormen, trammers and larrymen.....				. 793	
Motormen and larrymen.....	. 788		. 776		
Motormen's and larrymen's helpers.....	. 704				
Office workers, miscellaneous, n. e. c.....				. 900	
Oilers and greasers.....				. 802	
Oilers, plant.....		. 839			
Ore handlers.....	. 712				
Ore and metal handlers.....					. 822
Other furnace operators, n. e. c.....			. 818		
Helpers.....			. 785		
Other maintenance workers, n. e. c.....	. 969				
Helpers.....	. 812				
Other plant workers, n. e. c.....			. 863		
Helpers.....			. 741		
Other smelter workers, n. e. c.....		. 864			
Helpers.....		. 813			
Other workers, n. e. c.....					. 901
Painters.....		. 782			
Pipefitters.....		1. 004		. 999	
Pipefitters' helpers.....		. 815		. 829	
Pottery handlers.....		. 846			
Pourers and ladlers.....				. 921	
Powerhouse workers, n. e. c.....	. 902			. 881	
Powerhouse workers.....					. 988
Pumpmen.....		. 976		. 852	
Pumpmen, acid.....		1. 018			
Rackers.....				. 816	
Repairmen, plant equipment.....	. 890			. 914	
Helpers.....	. 848			. 809	
Repairmen, n. e. c.....					. 959
Helpers.....					. 839
Repairmen, track.....				. 691	
Retort and condenser makers.....		. 980			
Reverberatory-furnace chargers.....	. 801				
Reverberatory-furnace operators.....	. 889				
Reverberatory-furnace tappers.....	. 831				
Riggers.....				. 980	
Roaster operator.....	. 875	. 931		. 861	
Helpers.....		. 885			

TABLE 3.—*Straight-Time Average Hourly Earnings of Workers in Nonferrous-Metals Industry, by Branch, Occupation, and Region, June 1942—Continued*

## SMELTING AND REFINING—Continued

Occupation	Smelting			Electro-lytic copper refining	Electro-lytic production of zinc
	Copper	Zinc	Lead		
Samplers.....	\$0.815		\$0.744	\$0.828	\$0.964
Helpers.....		\$0.798		.793	
Screenmen, jigmen.....	.777	.811			
Helpers.....		.837			
Screen and filter operators.....					.896
Sintering-machine operators.....		.908			
Helpers.....		.865			
Sinter (roaster) operators.....			.749		
Stampers.....		.928			
Stenographers.....		.795		.843	
Storeroom men.....				.868	
Storeroom and warehouse workers.....					.759
Strippers.....				.923	.954
Stuffers.....		.909			
Switchboard operators, power.....				.944	
Switchmen, railroad.....	.908		.823		
Tank operators.....				.863	
Technicians.....	.980			1.107	
Technicians' assistants.....	.844			.747	
Tinsmiths.....		1.057			
Helpers.....		.839			
Track repairmen.....	.706				
Track repairmen, railroad.....			.714		
Transportation workers, n. e. c.....	.870		.808	.904	
Helpers.....				.814	
Truck and tractor drivers.....				.862	
Truck drivers.....					.898
Truckers, hand.....		.837	.850		
Voltmeter men.....				.845	
Washers and dryers.....				.796	
Watchmen.....	.769	.763	.706	.794	.763
Weighers and samplers.....		.819			
Weighers.....			.858	.870	
Welders.....		1.017			

A comparison of the occupational averages presented in these tables with the 1941 data published earlier reveals that for the most part the wage increases have been relatively uniform from one occupation to another. A change in the method of computing certain averages in one large plant has resulted in apparent wage decreases in two occupations. Actually, all occupations have experienced some wage increase.



## WAGE-RATE CHANGES IN UNITED STATES INDUSTRIES

THE following table gives information concerning wage-rate adjustments occurring during the month ending July 15, 1942, as shown by reports received from manufacturing and nonmanufacturing establishments which supply employment data to the Bureau of Labor Statistics.

As the Bureau's survey does not cover all establishments in an industry and furthermore, as some firms may have failed to report wage-rate changes, these figures should not be construed as representing the total number of wage changes occurring in manufacturing and nonmanufacturing industries.

*Wage-Rate Changes Reported by Manufacturing and Nonmanufacturing Establishments  
During Month Ending July 15, 1942<sup>1</sup>*

Group and Industry	Establishments		Employees		Average percent of change in wage rates of employees having increases
	Total number covered	Number reporting increases	Total number covered	Number receiving increases	
All manufacturing.....	34,442	1,113	8,803,321	565,522	7.1
Durable goods.....	13,297	532	5,273,594	424,098	6.6
Nondurable goods.....	21,145	581	3,529,727	141,424	8.3
Iron and steel and their products, not including machinery.....	2,600	106	1,246,055	26,808	7.7
Blast furnaces, steel works, and rolling mills.....	345	10	582,844	7,082	8.0
Bolts, nuts, washers, and rivets.....	62	4	18,369	445	11.3
Cutlery (not including silver and plated cutlery) and edge tools.....	107	4	14,533	269	10.6
Forgings, iron and steel.....	100	4	26,528	119	6.0
Hardware.....	159	5	41,473	2,059	5.1
Plumbers' supplies.....	102	7	17,587	1,237	6.7
Stamped and enameled ware.....	286	10	49,321	2,336	6.7
Steam and hot-water heating apparatus and steam fittings.....	121	7	46,913	2,693	7.4
Stoves.....	250	12	35,979	1,252	6.5
Structural and ornamental metalwork.....	285	8	38,477	648	8.2
Tools (not including edge tools, machine tools, files, and saws).....	114	6	17,509	1,075	7.0
Wirework.....	171	5	21,179	1,320	11.7
Screw-machine products.....	94	14	30,494	3,256	6.6
Machinery, not including transportation equipment.....	4,084	194	1,503,172	103,079	6.1
Agricultural implements (including tractors).....	120	3	68,653	865	6.8
Electrical machinery, apparatus, and supplies.....	621	27	(2)	18,129	11.2
Engines, turbines, water wheels, and windmills.....	90	3	(2)	460	7.1
Foundry and machine-shop products.....	2,358	120	468,082	25,950	7.8
Machine tools.....	150	3	(2)	47,100	3.1
Radios and phonographs.....	80	5	56,519	780	5.8
Textile machinery and parts.....	118	6	25,485	368	8.4
Machine-tool accessories.....	173	12	(2)	1,257	8.7
Pumps.....	105	5	33,017	953	12.4
Metalworking machinery not classified elsewhere.....	89	4	24,589	515	8.1
Transportation equipment.....	916	64	1,630,967	255,935	6.6
Aircraft.....	155	6	(2)	3,486	9.4
Automobiles.....	376	7	382,846	5,118	7.4
Cars, electric- and steam-railroad.....	71	3	(2)	590	7.0
Shipbuilding.....	266	43	(2)	243,078	6.6
Nonferrous metals and their products.....	1,178	50	307,451	18,271	7.2
Brass, bronze, and copper products.....	384	29	(2)	12,762	6.0
Lighting equipment.....	90	3	11,590	152	10.5
Smelting and refining—copper, lead, and zinc.....	47	5	28,771	3,059	11.0
Sheet-metal work.....	155	4	12,620	322	9.5
Nonferrous metals and their products, not elsewhere classified.....	53	4	16,131	799	7.9
Lumber and allied products.....	2,842	62	357,194	12,229	7.4
Furniture.....	763	11	107,191	984	7.2
Lumber:					
Millwork.....	543	5	39,094	902	6.1
Sawmills.....	704	21	138,571	7,914	6.9
Wooden boxes, other than cigar.....	148	5	15,246	371	5.7
Mattresses and bedsprings.....	196	3	9,644	48	14.5
Wooden containers.....	49	3	5,032	252	8.8
Lumber and allied products, n. e. c.....	127	10	15,538	1,461	10.4
Stone, clay, and glass products.....	1,587	56	228,755	7,776	7.9
Brick, tile, and terra cotta.....	480	12	38,371	891	9.7
Cement.....	133	11	25,556	2,010	6.4
Glass.....	152	6	68,046	2,318	5.2
Marble, granite, slate, and other products.....	225	4	5,077	91	10.6
Pottery.....	129	4	33,522	1,027	14.0
Concrete products.....	114	6	3,468	320	11.9
Lime.....	98	5	6,722	358	7.3
Stone, clay, and glass products, n. e. c.....	64	3	7,191	240	6.1

See footnotes at end of table.



*Wage-Rate Changes Reported by Manufacturing and Nonmanufacturing Establishments  
During Month Ending July 15, 1942—Continued*

Group and industry	Establishments		Employees		Average percent of change in wage rates of employees having increases
	Total number covered	Number reporting increases	Total number covered	Number receiving increases	
Textiles and their products.....	6,858	213	1,401,256	70,205	8.3
Fabrics.....	3,422	158	1,022,803	64,306	8.4
Cotton goods.....	819	13	463,147	9,382	8.3
Cotton smallwares.....	128	4	15,969	304	9.2
Dyeing and finishing textiles.....	204	13	52,965	3,950	10.2
Hosiery.....	513	12	100,436	3,603	7.1
Knitted outerwear.....	212	4	18,257	465	5.0
Knitted underwear.....	135	3	40,100	1,921	6.0
Silk and rayon goods.....	458	11	79,018	4,708	9.7
Woolen and worsted goods.....	414	80	163,832	35,813	8.8
Woolen felts.....	12	3	2,500	386	8.6
Wearing apparel.....	3,436	55	378,453	5,899	7.2
Clothing, men's.....	1,093	24	151,441	3,155	7.8
Clothing, women's.....	1,269	16	85,460	620	6.6
Shirts and collars.....	261	3	54,924	836	4.9
Textiles, not elsewhere classified.....	381	9	48,552	1,170	7.6
Leather and its manufactures.....	1,099	24	248,533	3,420	6.7
Boots and shoes.....	502	6	172,112	1,665	6.5
Leather.....	180	10	38,103	1,210	6.4
Boot and shoe cut stock and findings.....	125	3	10,224	103	10.8
Food and kindred products.....	5,216	148	586,279	11,838	9.5
Baking.....	1,002	42	86,087	4,355	9.9
Beverages.....	600	8	48,149	406	11.4
Butter.....	307	22	7,203	549	11.0
Canning and preserving.....	1,053	14	138,977	1,533	9.6
Confectionery.....	266	6	34,722	359	10.9
Flour.....	328	11	15,472	401	10.2
Slaughtering and meat packing.....	332	7	155,390	1,236	6.6
Condensed and evaporated milk.....	107	7	8,523	449	11.3
Feeds, prepared.....	105	12	5,210	515	11.1
Food, not elsewhere classified.....	644	14	36,763	1,289	7.8
Paper and printing.....	3,985	86	388,362	18,928	5.8
Boxes, paper.....	662	20	46,082	2,254	6.0
Paper and pulp.....	437	36	135,722	13,963	5.9
Printing and publishing:					
Book and job.....	1,489	12	76,431	312	7.6
Newspapers and periodicals.....	705	6	59,903	776	3.1
Paper goods, not elsewhere classified.....	160	7	24,861	1,177	6.6
Chemical, petroleum, and coal products.....	2,400	67	484,269	21,729	7.4
Chemicals.....	269	8	90,252	7,433	7.9
Explosives.....	54	5	( <sup>1</sup> )	1,401	6.5
Fertilizers.....	332	9	11,945	143	13.8
Paints and varnishes.....	486	16	22,410	863	7.2
Soap.....	89	3	15,068	1,858	2.7
Patent and proprietary medicines.....	104	5	4,987	219	9.2
Chemicals, not elsewhere classified.....	231	5	17,962	176	9.0
Rubber products.....	264	15	127,394	3,412	10.7
Rubber goods, other.....	217	14	51,043	3,295	10.8
Miscellaneous.....	1,117	27	223,197	11,814	12.1
Instruments—professional, scientific, and commercial.....	85	3	( <sup>1</sup> )	6,783	14.3
Optical goods.....	40	5	( <sup>1</sup> )	1,786	4.6
Miscellaneous industries, not elsewhere classified.....	621	11	58,174	873	10.5
Nonmanufacturing (except building construction).....	<sup>2</sup> 90,540	703	<sup>3</sup> 3,098,300	33,152	7.8
Bituminous-coal mining.....	<sup>1</sup> 1,260	4	<sup>3</sup> 309,100	117	13.5
Metalliferous mining.....	<sup>1</sup> 510	19	<sup>3</sup> 88,500	5,476	7.7
Quarrying and nonmetallic mining.....	<sup>1</sup> 1,280	22	<sup>3</sup> 48,300	769	7.7
Crude-petroleum production.....	<sup>1</sup> 510	4	<sup>3</sup> 37,200	794	4.5
Public utilities:					
Electric light and power.....	<sup>1</sup> 2,550	90	<sup>3</sup> 229,500	7,326	5.2
Manufactured gas.....	<sup>1</sup> 140	4	<sup>3</sup> 30,400	174	7.0
Street railways and busses.....	<sup>1</sup> 350	17	<sup>3</sup> 142,100	11,539	10.0
Trade:					
Wholesale trade.....	<sup>1</sup> 14,790	85	<sup>3</sup> 337,400	1,648	8.6
Retail trade.....	<sup>1</sup> 50,090	410	<sup>3</sup> 1,022,800	3,633	5.5
Hotels (year-round).....	<sup>1</sup> 1,810	11	<sup>3</sup> 132,000	465	12.3
Laundries.....	<sup>1</sup> 1,270	31	<sup>3</sup> 87,500	972	10.0

<sup>1</sup> Figures are not given for some industries to avoid disclosure of information concerning individual establishments. They are, however, included where practicable in "all manufacturing", and in the various industry groups. No decreases reported.

<sup>2</sup> Included in group totals but not available for publication separately.

<sup>3</sup> Approximate—based on previous month's sample.

PRINTING-TRADES WAGES IN MEXICO, 1942 <sup>1</sup>

THE union scale of daily wages in the printing trades in the Federal District of Mexico is as shown in the following schedules:

	Pesos
Typesetters.....	5. 79-9. 00
Pressmen.....	5. 79-9. 00
Pressmen (automatic press).....	9. 95
Pressmen (nonautomatic).....	8. 36-10. 78
Press feeders.....	7. 15
Apprentices.....	4. 12
Foremen, according to category of firm.....	12. 00-18. 00
Linotype operators, commercial workshops.....	14. 00
Linotype operators, newspapers.....	21. 50

Outside of the Federal District, daily wages range from 2 to 8 pesos <sup>2</sup> in the different Mexican States. The average wage is from 3.50 to 4.00 pesos, according to the section, extent of organization, and development of the industry.



## WAGES IN SWITZERLAND, APRIL 1942

WAGES fixed by collective agreements or by municipal regulations in 22 occupations in 5 cities in Switzerland increased, on the average, 5.7 percent in public services and 4.1 percent in private industry, between the end of October 1941 and the close of April 1942.<sup>3</sup> Similar statistics have been published annually since 1932 for the month of October for three cities—Zurich, Berne, and Basel—but in view of the need for information regarding changes in wages a special study was made at the end of April 1942 and coverage was extended to the cities of Lausanne and Geneva. During the war period—October 1939 to April 1942—the wage increase in private industry averaged 15.3 percent and that in the public services 10.9 percent. There was a decided difference between the increases for qualified and nonqualified workers in industry, the rates for the former having increased 14.6 percent and for the latter 20.8 percent. In the public services the corresponding increases were 9.5 and 12.4 percent. In certain occupations, particularly in private industry, the wages, cost-of-living bonus, and social allowances are graduated according to marital status and the number of children. Since the war, wages of unmarried persons have increased on an average 11.4 percent; those of married men without children, 14.8 percent; and those of fathers of 2 children, 20.6 percent. The corresponding increases for personnel in the public services were 7.3, 9.9, and 12.6 percent.

<sup>1</sup> Data are from report of Abbey Schoen, clerk at United States embassy in Mexico, D. F.

<sup>2</sup> The peso (100 centavos) = 20.6 cents.

<sup>3</sup> Switzerland. Département Fédéral de L'Économie Publique, La Vie Économique (Berne), May 1942.

*Wages Fixed by Collective Agreement or Municipal Regulation in Zurich and Lausanne,  
at End of October 1939, 1941, and April 1942*

[Average exchange rate of franc in June 1941 = 23.21 cents]

Occupation	Period	Rate of wages including cost-of-living bonus						Index, 1942 (1939=100)	
		Zurich			Lausanne				
		October 1939	October 1941	April 1942	October 1939	October 1941	April 1942	Zu- rich	Lau- sanne
		<i>Francs</i>	<i>Francs</i>	<i>Francs</i>	<i>Francs</i>	<i>Francs</i>	<i>Francs</i>		
Bakers <sup>1</sup> .....maximum..	Week	94.00	\$ 103.23	112.48	\$ 316.00	\$ 328.50	\$ 361.00	119.7	114.2
Masons.....average..	Hour	1.69	1.89	1.96	1.60	1.79	1.86	116.0	116.3
Carpenters.....minimum..	do.	1.71	1.91	1.98	1.60	1.79	1.86	115.8	116.3
Painters.....do.	do.	1.70	1.90	1.95	1.70	1.82	1.90	114.7	111.8
Cabinetmakers.....average..	do.	1.86	2.05	2.12	1.60	1.75	1.80	114.0	112.5
Upholsterers.....do.	do.	1.86	2.08	2.14	1.70	1.75	1.80	115.1	105.9
Building laborers.....do.	do.	1.35	1.55	1.62	\$ 1.30	\$ 1.49	\$ 1.56	120.0	120.0
Printing, hand compositors <sup>1</sup> .....minimum..	Week	91.00	100.00	107.04	86.00	95.00	102.14	117.6	118.8
Printing-machine operators <sup>1</sup> .....minimum..	do.	101.00	110.00	117.04	96.00	105.00	110.14	115.9	114.7
Bookbinders <sup>1</sup> .....do.	Hour	1.65	1.82	1.97	\$ 79.62	\$ 83.62	\$ 88.92	119.4	111.7
Bookbinders assistants <sup>1</sup> .....do.	do.	1.05	1.20	1.35				128.6	
Locksmiths.....do.	do.		1.70	1.77	1.60	1.75	1.75		109.4
Tinsmiths.....do.	do.	1.75	1.95	2.02	1.60	1.76	1.80	115.4	112.5
Electricians.....do.	do.	1.75	1.95	2.02	1.75	1.90	1.90	115.4	108.6
Steam fitters.....do.	do.	1.78	2.03	2.05	1.58	1.74	1.85	115.2	117.1
Electrical fitters: Municipal enterprises <sup>1</sup> .....maximum..	Month	480.30	507.30	539.00	416.67	464.67	464.67	112.2	111.5
Assistants (municipal enter- prises) <sup>1</sup> .....maximum..	do.	396.85	423.85	454.00	383.33	431.33	431.33	114.4	112.5
Conductors, tramways and busses.....maximum..	do.	<sup>1</sup> 480.30	<sup>1</sup> 507.30	<sup>1</sup> 539.00	<sup>6</sup> 400.00	<sup>6</sup> 420.00	<sup>6</sup> 430.00	112.2	107.5
Drivers, busses.....do.	do.	<sup>1</sup> 494.20	<sup>1</sup> 521.20	<sup>1</sup> 553.00	<sup>7</sup> 400.00	<sup>7</sup> 420.00	<sup>7</sup> 430.00	111.9	107.5
Railroad workers, mainte- nance <sup>1</sup> .....maximum..	do.	352.25	\$ 370.65	407.25	347.25	\$ 363.95	397.25	115.6	114.4
Chauffeurs.....do.	Week	89.50	97.50	101.50	\$ 350.00	\$ 375.00	\$ 375.00	113.4	107.1
Carters.....do.	do.	80.00	88.00	92.00	\$ 330.00	\$ 355.00	355.00	115.0	107.6

<sup>1</sup> Married with 2 children.

<sup>2</sup> An autumn allowance of 60 francs is paid plus 10 francs for each child.

<sup>3</sup> Per month.

<sup>4</sup> Minimum.

<sup>5</sup> Per week.

<sup>6</sup> Tramway conductors only.

<sup>7</sup> Conductors and drivers.

<sup>8</sup> Workers earning 4,500 francs per year or less receive an autumn allowance of 200 francs and a children's allowance of 20 francs; for workers receiving more than 4,500 francs a reduced bonus is paid; unmarried workers receive half the allowance of married workers.

<sup>9</sup> Nonrenewable autumn allowance of 20 francs for unmarried, 30 francs for married persons and heads of families.

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# Wage and Hour Regulation

## MERGER OF WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS

BY ADMINISTRATIVE order of the Secretary of Labor, the Wage and Hour and Public Contracts Divisions of the United States Department of Labor were merged, effective October 15, 1942.<sup>1</sup> The consolidation was made to promote greater efficiency and to avoid duplication of effort by the two divisions in carrying out their work under the Fair Labor Standards Act and the Public Contracts Act, respectively. The shift was expected to result in a consistent policy of enforcement and interpretation of the two laws, in wholesale coordination of enforcement, and in elimination of duplication of inspection by having one inspection cover the issues involved under both acts. A material reduction in the budget was made possible by the change.

The combined agency will be known as the Wage and Hour and Public Contracts Divisions. Offices are to be maintained in New York City and Washington, D. C.

Certain duties and functions of the Secretary of Labor under the Public Contracts Act were delegated to the Administrator. The latter will serve as the administrative head in the administration of the provisions of the act; make recommendations to the Secretary on such matters as minimum wages, exceptions, and eligibility of firms; issue rulings and interpretations on the advice of the solicitor; advise and collaborate with Federal, State, and other agencies with regard to matters of policy; and make recommendations to the Secretary for the issuance, amendment, or rescinding of such rules and regulations as he may deem to be necessary to carry out the provisions of the law.

## HANDICAPPED WORKERS UNDER PUBLIC CONTRACTS ACT

ALL determinations of prevailing minimum wages, issued by the Secretary of Labor under the Public Contracts Act and in effect on August 12, 1942, were amended effective September 15, 1942, to provide for handicapped or superannuated workers the same subminimum rates of pay under that act as are applicable for them under the Fair Labor Standards Act.<sup>2</sup> This action was taken after due notice to allow interested persons an opportunity to show cause why the proposed change should not be made.

<sup>1</sup> U. S. Department of Labor. Office of the Secretary. Press release No. S. 42-399, August 30, 1942.

<sup>2</sup> Idem. Division of Public Contracts. Press releases Nos. R. 434-42, 435-42, and 436-42. Washington, 1942.

The regulations<sup>1</sup> permit the payment of subminimum wages to workers whose earning capacity is impaired by age or physical or mental deficiency or injury either by commercial establishments or as handicapped clients in sheltered workshops. Rates of pay may not be less than 75 percent of the minimum applicable for the same kind of work, unless after investigation a lower wage rate appears to be clearly justified. Under the amendment, handicapped and superannuated workers may not be employed at subminimum under any other conditions than these, and this also applies to all future contracts for which bids are solicited under the Walsh-Healey (Public Contracts) Act.



## WAGE DETERMINATIONS UNDER FAIR LABOR STANDARDS ACT

### *40-Cent Rate for Glove Workers*

HOURLY wages of employees in the glove and mitten industry were made subject to a 40-cent minimum by a wage order issued under the terms of the Fair Labor Standards Act, effective September 21, 1942.<sup>2</sup> The previous minimums were 32.5 cents an hour for work gloves and mittens and 35.0 cents for other gloves and mittens; both of these rates became effective on July 15, 1940.<sup>3</sup>

Under the newly established 40-cent rate it is estimated that 38,000 employees are covered, of whom some 16,000 will receive wage increases.

### *40-Cent Minimum for Railroad Workers*

Effective August 31, 1942, the minimum hourly rate of pay for workers engaged in the railroad carrier industry became 40 cents, by wage order of the Administrator of the Fair Labor Standards Act.<sup>4</sup> Between 35,000 and 50,000 of the approximately 1,350,000 employees in the industry received wage increases as a result of the order. The 40-cent minimum hourly rate replaces the 36-cent minimum for trunk-line railroads and the 33-cent minimum for short-line railroads established in 1941.<sup>5</sup> About 60,000 trunk-line employees and 4,000 short-line employees, most of whom were maintenance-of-way workers, had been directly affected by the earlier wage order, and it was anticipated that many of the same employees would again have their pay advanced as a result of the 1942 wage order.

<sup>1</sup> Code of Federal Regulations of the United States of America, 1940 Supplement, Title 29, chapter V, section 524.7.

<sup>2</sup> U. S. Department of Labor. Wage and Hour Division. Press release No. R-1857, August 26, 1942.

<sup>3</sup> See Monthly Labor Review, September 1940 (p. 554).

<sup>4</sup> U. S. Department of Labor. Wage and Hour Division. Press release No. R-1847, August 10, 1942.

<sup>5</sup> See Monthly Labor Review, January 1941 (p. 173).

# Building Operations

## SUMMARY OF BUILDING CONSTRUCTION IN PRINCIPAL CITIES, AUGUST 1942 <sup>1</sup>

THE downward trend in building-permit valuations continued through August, with a 60-percent drop from the total for August of last year. Although increasingly stringent restrictions on the use of critical building materials have affected all classes of building, new residential construction registered the sharpest decline, 66 percent. Permit valuations for new nonresidential buildings decreased 58 percent, and those for additions and repairs to existing structures, 38 percent.

Permit valuations for new residential construction rose 5 percent between July and August 1942, as a result of increases in privately financed housing. However, contracts were awarded for fewer units in public housing projects in August than in July. There was a slight increase in permit valuations for additions and repairs. A 39-percent drop in new nonresidential valuations more than offset gains in other types of construction, and caused a reduction of 18 percent in total permit valuations from July to August.

### *Comparison of August 1942 With August 1941 and July 1942*

The volume of building construction in 2,391 identical cities with populations of 500 and over which reported to the Bureau of Labor Statistics in July and August 1942 and August 1941 is summarized in table 1.

TABLE 1.—Summary of Building Construction for Which Permits Were Issued in 2,391 Identical Cities, August 1942

Class of construction	Number of buildings			Permit valuation		
	August 1942	Percent of change from—		August 1942 (in thousands of dollars)	Percent of change from—	
		July 1942	August 1941		July 1942	August 1941
All construction .....	53, 232	+1. 5	-39. 5	114, 071	-17. 5	-59. 9
New residential .....	10, 719	+3. 9	-66. 7	49, 296	+5. 3	-66. 2
New nonresidential .....	8, 508	+9. 6	-42. 8	42, 697	-38. 6	-58. 5
Additions, alterations, and repairs .....	34, 005	-1. 0	-17. 1	22, 078	+7. 7	-38. 5

<sup>1</sup> More detailed information by geographic divisions and population groups is contained in a separate mimeographed release entitled "Building Construction, August 1942," copies of which will be furnished upon request.



The number of new dwelling units for which permits were issued and the permit valuation of such new housekeeping residential construction in the 2,391 cities reporting in August 1942 are presented in table 2. Percentage changes between August 1942 and July 1942 and August 1941 are also shown.

TABLE 2.—*Number and Permit Valuation of New Dwelling Units in 2,391 Identical Cities, August 1942, by Source of Funds and Type of Dwelling*

Source of funds and type of dwelling	Number of dwelling units			Permit valuation		
	August 1942	Percent of change from—		August 1942 (in thousands of dollars)	Percent of change from—	
		July 1942	August 1941		July 1942	August 1941
All dwellings.....	15,721	+11.2	-57.3	491,192	+8.5	-65.9
Privately financed.....	14,318	+16.1	-51.0	44,643	+13.0	-61.3
1-family.....	8,142	-1.9	-67.3	26,990	+7.8	-74.1
2-family <sup>1</sup> .....	1,294	+18.2	-37.5	4,716	+47.7	-14.3
Multifamily <sup>2</sup> .....	4,882	+66.1	+118.2	12,937	+35.9	+127.6
Publicly financed.....	1,403	-22.1	-81.5	4,549	-22.0	-84.4

<sup>1</sup> Includes 1- and 2-family dwellings with stores.

<sup>2</sup> Includes multifamily dwellings with stores.

### Comparison of First 8 Months of 1941 and 1942

Permit valuations reported in the first 8 months of 1941 and 1942 are compared in table 3.

TABLE 3.—*Permit Valuation of Building Construction, by Class of Construction, First 8 Months of 1941 and 1942<sup>1</sup>*

Class of construction	Permit valuation		
	First 8 months of—		Percent of change
	1942 (in thousands of dollars)	1941 (in thousands of dollars)	
All construction.....	1,396,649	2,046,517	-31.8
New residential.....	612,951	1,044,554	-41.3
New nonresidential.....	593,511	744,231	-20.3
Additions, alterations, and repairs.....	190,187	257,732	-26.2

<sup>1</sup> Based on reports from cities with a population of 500 and over, the cities being identical for any given month of both years.

The number and permit valuation of new dwelling units for which permits were issued in the first 8 months of 1942 are compared with similar data for the corresponding months of 1941 in table 4.

TABLE 4.—Number and Permit Valuation of New Dwelling Units, by Source of Funds and Type of Dwelling, First 8 Months of 1941 and 1942<sup>1</sup>

Source of funds and type of dwelling	Number of dwelling units			Permit valuation		
	First 8 months of—		Percent of change	First 8 months of—		Percent of change
	1942	1941		1942 (in thousands of dollars)	1941 (in thousands of dollars)	
All dwellings.....	182,640	275,518	-33.7	607,942	1,033,118	-41.2
Privately financed.....	133,470	233,080	-42.7	445,033	892,385	-50.1
1-family.....	93,906	180,699	-48.0	336,359	745,325	-54.9
2-family <sup>2</sup> .....	11,434	14,917	-23.3	31,372	38,614	-18.8
Multifamily <sup>3</sup> .....	28,130	37,464	-24.9	77,302	108,446	-28.7
Publicly financed.....	49,170	42,438	+15.9	162,909	140,733	+15.8

<sup>1</sup> Based on reports from cities with a population of 500 and over, the cities being identical for any given month of both years.

<sup>2</sup> Includes 1- and 2-family dwellings with stores.

<sup>3</sup> Includes multifamily dwellings with stores.

### Construction From Public Funds, August 1942

The value of contracts awarded and force-account work started during July and August 1942 and August 1941 on all construction projects financed wholly or partially from Federal funds is shown in table 5. This table includes other types of construction as well as building construction, both inside and outside 2,391 reporting cities.

TABLE 5.—Value of Contracts Awarded and Force-Account Work Started on Construction Projects Financed From Federal Funds, July and August 1942 and August 1941

Federal agency	Contracts awarded and force-account work started (in thousands of dollars)		
	August 1942 <sup>1</sup>	July 1942 <sup>2</sup>	August 1941 <sup>3</sup>
Total.....	3,879,307	444,535	493,027
War Public Works.....	1,740	432	( <sup>4</sup> )
Federal agency projects under the WPA.....	0	0	195
Regular Federal appropriations <sup>5</sup> .....	3,864,329	433,321	458,210
Federal Public Housing Authority <sup>6</sup> .....	13,238	10,782	34,622

<sup>1</sup> Preliminary; subject to revision.

<sup>2</sup> Revised.

<sup>3</sup> Program not started until October 1941.

<sup>4</sup> Exclusive of contracts awarded for public housing.

<sup>5</sup> Includes contracts awarded for all public housing projects.

<sup>6</sup> Includes \$11,004,522 for contracts awarded on USHA projects and \$23,617,760 for contracts awarded from regular Federal appropriations.

The value of all contracts awarded for public buildings and highway construction to be financed wholly from State funds, as reported by the State governments for July and August 1942 and August 1941, was as follows:

	Public buildings	Highway construction
August 1941.....	\$2,473,568	\$13,481,347
July 1942.....	648,113	6,742,492
August 1942.....	519,150	7,724,142

### Coverage of Building Permit Statistics

Building-permit data are collected by the Bureau of Labor Statistics each month from more than 2,500 places having a population of 500 or more in 1940, from which are selected those for cities which also reported in the preceding month and in the corresponding month of the previous year. In addition, the Bureau receives notifications of the value of construction contracts awarded by Federal and State governments. Federal and State building construction in the 2,391 reporting cities totaled \$35,220,000 in August 1942, as contrasted with \$44,127,000 in the previous month, and \$89,936,000 in August 1941.

The permit-valuation figures represent estimates of construction costs made by prospective private builders when applying for permits to build and the value of contracts awarded by Federal or State governments. No land costs are included. Unless otherwise indicated, only building construction within the corporate limits of the reporting cities is included in the tabulations.

Construction from Private Funds, August 1942			
Value of construction contracts awarded, in thousands of dollars			
Federal and State governments			
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## Retail Prices

### FOOD PRICES IN AUGUST 1942

AVERAGE retail costs of food advanced 1.2 percent between July 14 and August 18, due to sharp increases for several foods which are exempt from price-control regulations. Of the 54 foods included in the Bureau's index 31 showed increases in prices, 13 decreased, and 10 remained unchanged from the previous month.

Prices of foods not subject to the General Maximum Price Regulation continued to advance, with a rise of 2.2 percent during the month, and nearly 10 percent during the 3-month period from mid-May, when the Price Regulation at retail became effective. Controlled food prices also rose between July and August (0.5 percent) and at mid-August were 0.3 percent lower on the average than at mid-May.

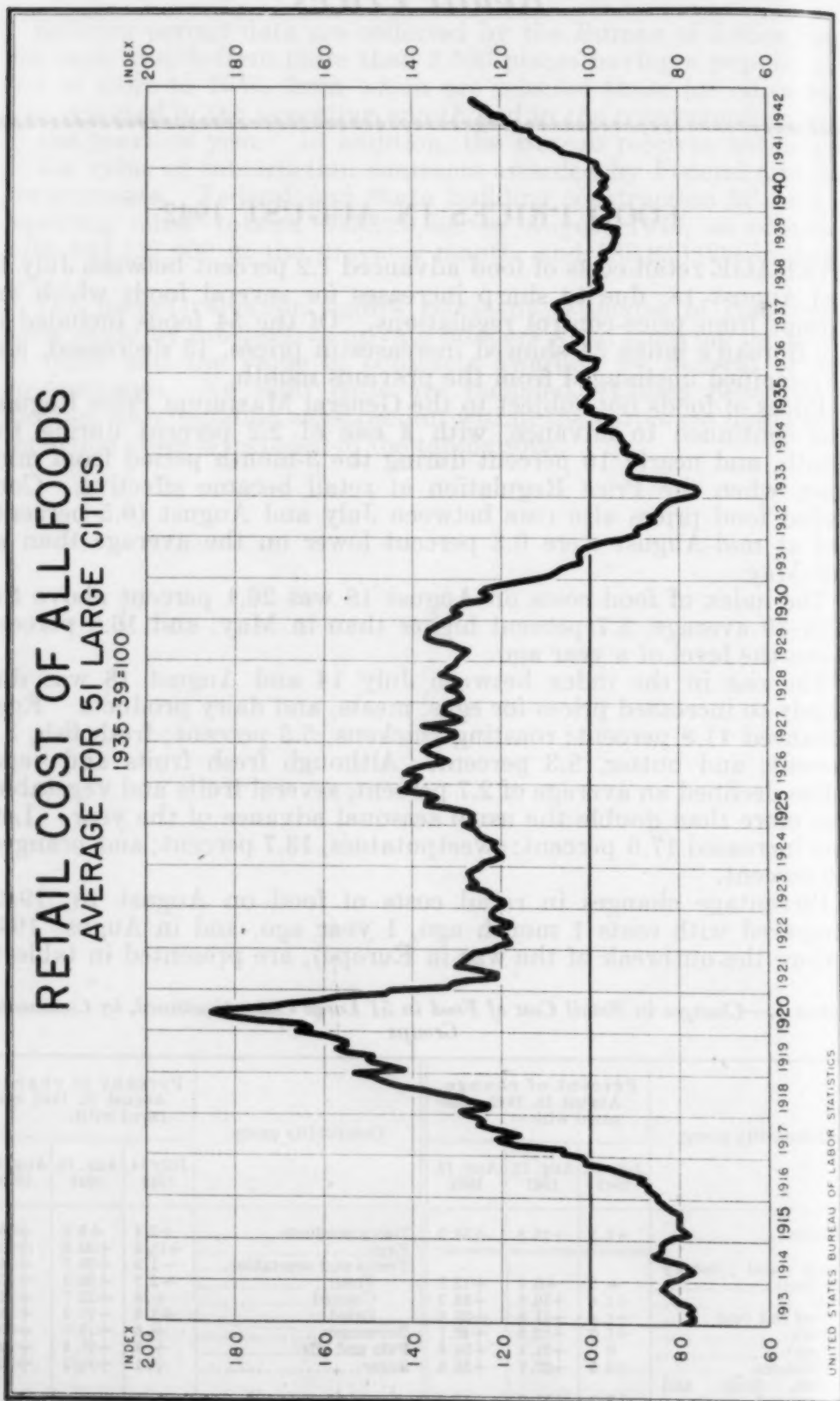
The index of food costs on August 18 was 26.1 percent above the 1935-39 average, 3.7 percent higher than in May, and 16.8 percent above the level of a year ago.

The rise in the index between July 14 and August 18 was due largely to increased prices for eggs, meats, and dairy products. Eggs advanced 11.8 percent; roasting chickens, 5.5 percent; fresh fish, 3.7 percent; and butter, 8.3 percent. Although fresh fruits and vegetables declined an average of 2.7 percent, several fruits and vegetables rose more than double the usual seasonal advance of the year. Lettuce increased 17.6 percent; sweetpotatoes, 13.7 percent; and oranges, 7.9 percent.

Percentage changes in retail costs of food on August 18, 1942, compared with costs 1 month ago, 1 year ago, and in August 1939 (before the outbreak of the war in Europe), are presented in table 1.

TABLE 1.—Changes in Retail Cost of Food in 51 Large Cities Combined, by Commodity Groups

Commodity group	Percent of change, August 18, 1942, compared with—			Commodity group	Percent of change, August 18, 1942, compared with—		
	July 14, 1942	Aug. 12, 1941	Aug. 15, 1939		July 14, 1942	Aug. 12, 1941	Aug. 15, 1939
All foods.....	+1.2	+16.8	+34.9	Dairy products.....	+2.4	+9.9	+35.1
Cereals and bakery products.....	+2	+6.4	+12.7	Eggs.....	+11.8	+20.6	+60.5
Meats.....	+1.6	+16.5	+35.3	Fruits and vegetables.....	-1.9	+28.7	+44.0
Beef and veal.....	+1.4	+11.8	+25.8	Fresh.....	-2.7	+30.3	+45.8
Pork.....	+1.0	+12.6	+40.1	Canned.....	+4	+22.7	+34.2
Lamb.....	0	+21.4	+34.6	Dried.....	+3.5	+27.3	+53.8
Chickens.....	+5.5	+27.7	+38.6	Beverages.....	+6	+19.0	+30.1
Fish, fresh and canned.....	+2.2	+31.2	+65.4	Fats and oils.....	+3	+21.4	+42.5
				Sugar.....	+1	+16.2	+32.5



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## Details by Commodity Groups

Indexes of retail costs of foods by commodity groups are presented in table 2 for June, July, and August 1942, and for August in the years 1941, 1939, and 1929. The accompanying charts show the trend of the costs of all foods, January 1913 to August 1942, inclusive, and for each major commodity group for the period January 1929 to August 1942, inclusive.

TABLE 2.—*Indexes of Retail Costs of Food in 51 Large Cities Combined,<sup>1</sup> by Commodity Groups, in Specified Months*

[1935-39=100]

Commodity group	1942			1941	1939	1929
	Aug. 18 <sup>2</sup>	July 14	June 16	Aug. 12	Aug. 15	Aug. 15
All foods.....	126.1	124.6	123.2	108.0	93.5	136.9
Cereals and bakery products.....	105.3	105.1	105.1	99.0	93.4	108.2
Meats.....	129.5	127.5	126.6	111.2	95.7	132.1
Beef and veal.....	125.3	123.6	123.3	112.1	99.6	( <sup>3</sup> )
Pork.....	123.3	122.1	121.9	109.5	88.0	( <sup>3</sup> )
Lamb.....	133.0	133.0	130.7	109.6	98.8	( <sup>3</sup> )
Chickens.....	131.8	125.7	123.3	103.1	94.6	( <sup>3</sup> )
Fish, fresh and canned.....	164.7	161.2	158.3	125.5	99.6	( <sup>3</sup> )
Dairy products.....	125.8	<sup>4</sup> 122.8	122.1	114.5	93.1	129.7
Eggs.....	145.6	<sup>4</sup> 130.2	119.7	120.7	90.7	141.4
Fruits and vegetables.....	133.1	135.7	133.8	103.4	92.4	190.7
Fresh.....	135.3	139.1	136.7	103.8	92.8	199.3
Canned.....	122.9	122.4	122.2	100.2	91.6	126.7
Dried.....	138.9	134.2	132.6	109.1	90.3	172.3
Beverages.....	123.5	122.8	122.6	103.8	94.9	165.3
Fats and oils.....	120.4	120.0	120.0	99.2	84.5	127.8
Sugar.....	126.7	126.6	126.7	109.0	95.6	115.0

<sup>1</sup> Aggregate costs of 54 foods in each city, weighted to represent total purchases of families of wage earners and lower-salaried workers, have been combined with the use of population weights.

<sup>2</sup> Preliminary.

<sup>3</sup> Not available.

<sup>4</sup> Revised.

**Cereals and bakery products.**—Retail prices of wheat flour advanced 2.6 percent, due to sharp price increases in 6 cities, while the average price of bread remained unchanged. Advances in bread prices for Kansas City and Los Angeles were offset by declines for Buffalo, Atlanta, and Dallas. The only other sizable change in this group was for corn meal, which showed a 2.1-percent increase.

**Meats.**—Average costs of lamb were unchanged from mid-July to mid-August, yielding to a 60-day temporary ceiling at the highest prices in effect between July 27 and July 31, inclusive. Prices of leg of lamb moved upward slightly, 0.8 percent, and rib chops dropped 1.1 percent.

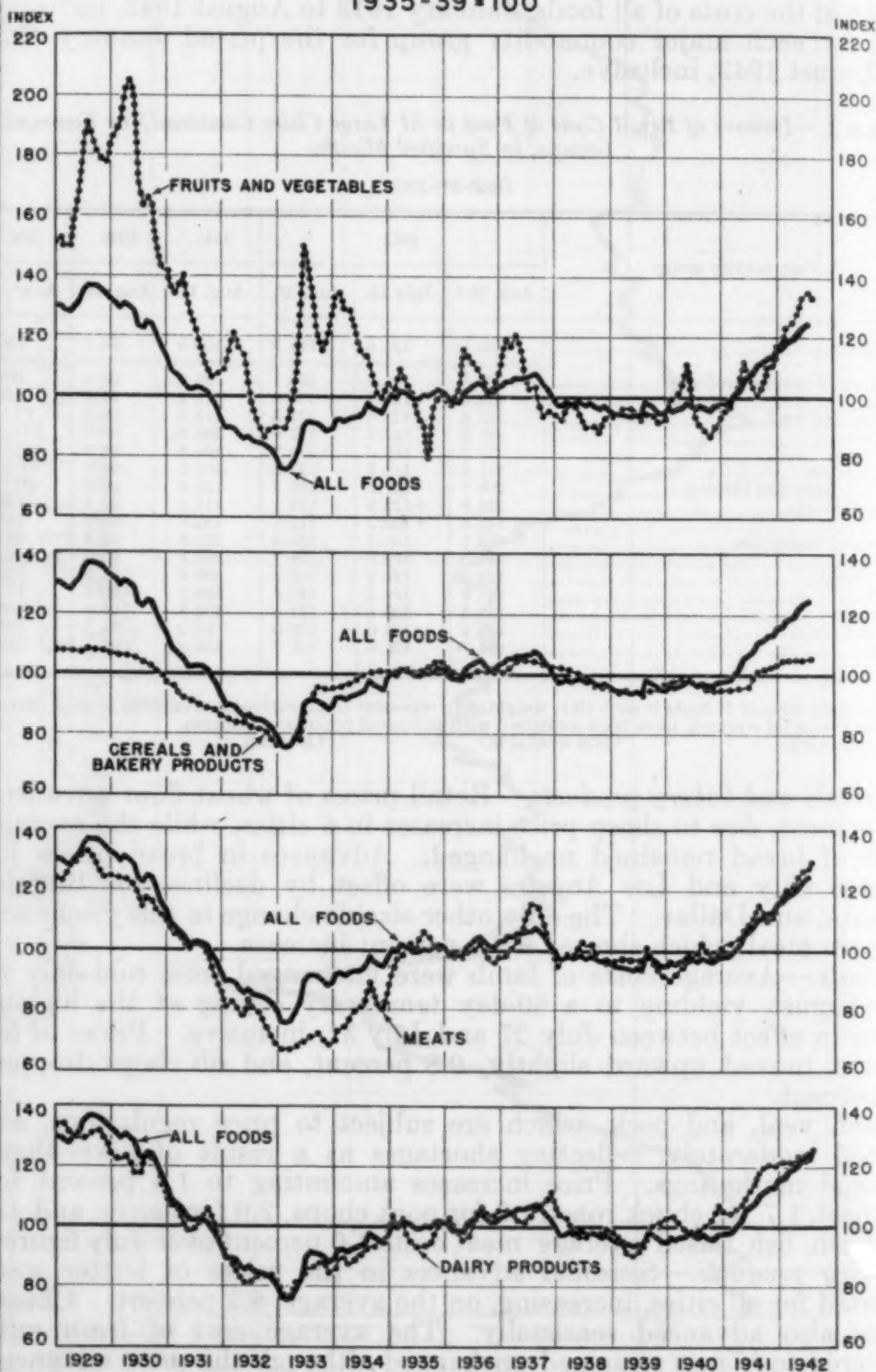
Beef, veal, and pork, which are subject to price regulations, advanced moderately, reflecting shortages as a result of lower-than-seasonal marketings. Price increases amounting to 1.5 percent for rib roast, 1.7 for chuck roast, 1.2 for pork chops, 2.0 for bacon, and 4.0 for fresh fish raised average meat costs 1.6 percent over July figures.

**Dairy products.**—Seasonal advances in the prices of butter were reported for all cities, increasing, on the average, 8.3 percent. Cheese prices also advanced seasonally. The average cost of fresh milk delivered to homes remained unchanged although the price advanced one-half cent in San Francisco. Average prices of evaporated milk also remained unchanged.



# RETAIL COST OF FOOD

1935-39 = 100



U. S. DEPT. OF LABOR - BUREAU OF LABOR STATISTICS

*Eggs.*—The usual seasonal advance in the prices of eggs was reported in all cities, increasing on the average 11.8 percent. Eggs were 20.6 percent higher on the average than a year ago.

*Fruits and vegetables.*—Prices of fruits and vegetables declined in August, due largely to seasonal decreases for apples, potatoes, cabbages, and onions. Lettuce and sweetpotatoes, which usually decrease at this season of the year, advanced sharply by 17.6 and 13.7 percent, respectively. Prices of canned pineapple and peaches edged upward slightly and dried prunes advanced by nearly 8.0 percent.

*Beverages.*—The prices of coffee and tea rose 1.0 and 0.9 percent, respectively, causing the group to advance 0.6 percent over July. Increases in the prices of coffee amounted to 18.9 percent over a year ago. Tea rose 21.5 percent over the same period.

*Fats and oils.*—The average price of peanut butter rose 3.1 percent, with increases in 45 cities as the ceiling was lifted by the Office of Price Administration on prices of the 1942 pack on July 29. Slight advances were also reported for lard (0.6 percent) and oleomargarine (0.4 percent).

*Sugar.*—The average cost of sugar remained practically unchanged. Advances were reported in 8 cities and declines in 13 cities, resulting, on the average, in an increase of 0.1 percent.

Average prices of 65 foods in 51 cities combined are shown in table 3 for July and August 1942 and August 1941.

TABLE 3.—Average Retail Prices of 65 Foods in 51 Large Cities Combined, August and July 1942 and August 1941

Article	1942		1941
	Aug. 18 <sup>1</sup>	July 14	Aug. 12
<b>Cereals and bakery products:</b>			
<b>Cereals:</b>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Flour, wheat.....10 pounds.....	52.2	50.9	46.6
Macaroni.....pound.....	14.1	14.1	13.8
Wheat cereal <sup>2</sup> .....28-oz. pkg.....	24.0	24.1	23.6
Corn flakes.....8-ounces.....	7.1	7.2	7.1
Corn meal.....pound.....	4.9	4.8	4.3
Rice <sup>3</sup> .....do.....	12.4	<sup>3</sup> 12.3	8.9
Rolled oats <sup>3</sup> .....do.....	8.7	8.7	7.1
<b>Bakery products:</b>			
Bread, white.....do.....	8.7	8.7	8.3
Bread, whole-wheat.....do.....	9.5	9.5	9.0
Bread, rye.....do.....	9.7	9.7	9.5
Vanilla cookies.....do.....	27.6	27.9	25.6
Soda crackers.....do.....	16.5	16.5	15.0
<b>Meats:</b>			
<b>Beef:</b>			
Round steak.....do.....	44.0	43.6	40.3
Rib roast.....do.....	34.4	33.9	30.9
Chuck roast.....do.....	29.7	29.2	25.4
Veal: Cutlets.....do.....	54.6	54.1	48.4
<b>Pork:</b>			
Chops.....do.....	42.9	42.4	38.4
Bacon, sliced.....do.....	40.0	39.2	36.0
Ham, sliced <sup>3</sup> .....do.....	59.2	59.0	52.5
Ham, whole.....do.....	38.0	37.7	33.3
Salt pork.....do.....	23.7	23.9	20.0
<b>Lamb:</b>			
Leg.....do.....	37.7	37.4	29.7
Rib chops.....do.....	46.8	47.3	40.1
Poultry: Roasting chickens.....do.....	42.0	39.8	32.9
<b>Fish:</b>			
Fresh, frozen.....do.....	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Salmon, pink.....16-oz. can.....	21.7	21.7	18.7
Salmon, red <sup>2</sup> .....do.....	40.4	<sup>2</sup> 40.3	30.6

See footnotes at end of table.

TABLE 3.—Average Retail Prices of 65 Foods in 51 Large Cities Combined, August and July 1942 and August 1941—Continued

Article	1942		1941
	Aug. 18 <sup>1</sup>	July 14	Aug. 12
<b>Dairy products:</b>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Butter.....pound.....	48.4	44.7	42.2
Cheese.....do.....	34.0	33.9	31.3
Milk, fresh (delivered).....quart.....	15.0	15.0	13.8
Milk, fresh (store).....do.....	13.5	13.5	12.8
Milk, fresh (delivered and store) <sup>2</sup> .....do.....	14.5	14.5	13.4
Milk, evaporated.....14½-oz. can.....	8.7	8.7	8.2
Eggs.....dozen.....	51.7	46.1	42.7
<b>Fruits and vegetables:</b>			
<b>Fresh:</b>			
Apples.....pound.....	6.6	8.5	4.7
Bananas.....do.....	10.0	10.4	7.2
Oranges.....dozen.....	39.5	36.6	35.2
Grapefruit <sup>3</sup> .....each.....	8.4	7.6	(4)
Beans, green.....pound.....	12.1	10.4	9.1
Cabbage.....do.....	4.2	4.6	4.2
Carrots.....bunch.....	6.8	7.0	5.1
Lettuce.....head.....	14.7	12.5	9.9
Onions.....pound.....	4.5	4.9	4.4
Potatoes.....15 pounds.....	49.5	58.9	34.1
Spinach.....pound.....	10.6	9.4	9.7
Sweetpotatoes.....do.....	8.3	7.3	5.7
<b>Canned:</b>			
Peaches.....No. 2½ can.....	23.6	23.5	19.3
Pineapple.....do.....	27.6	27.3	21.6
Grapefruit juice <sup>3</sup> .....No. 2 can.....	11.7	10.9	(4)
Beans, green <sup>3</sup> .....do.....	13.8	13.8	10.9
Corn.....do.....	13.1	12.8	11.8
Peas.....do.....	15.0	15.5	13.6
Tomatoes.....do.....	11.7	11.9	9.4
<b>Dried:</b>			
Prunes.....pound.....	13.7	12.7	9.8
Navy beans.....do.....	9.0	8.9	7.8
<b>Beverages:</b>			
Coffee.....do.....	28.9	28.6	24.3
Tea.....¼ pound.....	22.6	22.4	18.6
Cocoa <sup>3</sup> .....¼ pound.....	10.2	10.2	9.1
<b>Fats and oils:</b>			
Lard.....pound.....	17.1	17.0	14.0
<b>Shortening, other than lard:</b>			
In cartons.....do.....	19.6	19.6	16.1
In other containers.....do.....	24.8	25.3	21.0
Salad dressing.....pint.....	25.2	25.2	22.4
Oleomargarine.....pound.....	22.4	22.3	17.2
Peanut butter.....do.....	26.8	26.0	18.3
<b>Sugar and sweets:</b>			
Sugar.....do.....	6.8	6.8	5.9
Corn sirup <sup>4</sup> .....24 ounces.....	15.0	14.8	14.0
Molasses <sup>5</sup> .....18 ounces.....	14.7	14.6	13.5

<sup>1</sup> Preliminary.<sup>2</sup> Not included in index.<sup>3</sup> Revised.<sup>4</sup> Composite prices not computed.<sup>5</sup> Priced first time on Oct. 14, 1941.

### Details by Cities

Food costs advanced in 43 cities and declined in 8 between July 14 and August 18. The largest increases were reported for Memphis (5.3 percent), Birmingham (4.0 percent), and Seattle (4.0 percent). Increases in prices of eggs and fresh vegetables were primarily responsible for the higher costs in these three cities. The largest decreases were for Detroit (1.0 percent), Manchester (0.6 percent), and Cleveland (0.6 percent). Large decreases in prices for apples and potatoes were responsible for lower costs in these cities.



Food costs in all 51 cities included in the index are above August 1941 levels, the amount of increase varying from 11.7 percent for Minneapolis to 25.2 for Los Angeles.

Indexes of food costs by cities are presented in table 4 for July and August 1942 and August 1941.

TABLE 4.—Indexes of the Average Retail Cost of All Foods, by Cities,<sup>1</sup> August and July 1942 and August 1941

[1935-39=100]

City	1942		1941	City	1942		1941
	Aug. 18 <sup>2</sup>	July 14	Aug. 12		Aug. 18 <sup>2</sup>	July 14	Aug. 12
United States.....	126.1	124.6	108.0	South Atlantic:			
New England:				Atlanta.....	124.9	122.7	107.0
Boston.....	122.5	122.6	107.3	Baltimore.....	129.6	128.3	109.6
Bridgeport.....	126.4	124.9	108.4	Charleston, S. C.....	125.2	125.0	107.9
Fall River.....	125.4	124.8	107.1	Jacksonville.....	134.9	133.1	113.6
Manchester.....	125.2	126.0	108.4	Norfolk <sup>3</sup> .....	131.6	129.8	110.8
New Haven.....	125.2	124.2	107.2	Richmond.....	125.7	123.6	107.5
Portland, Maine.....	125.8	124.4	107.9	Savannah.....	132.3	132.0	114.8
Providence.....	126.1	125.4	108.9	Washington, D. C.....	127.5	125.3	107.4
Middle Atlantic:				East South Central:			
Buffalo.....	127.6	127.8	111.8	Birmingham.....	126.1	121.2	106.8
Newark.....	127.0	125.1	108.0	Louisville.....	124.3	122.4	107.8
New York.....	125.1	122.8	107.8	Memphis.....	132.1	125.5	106.4
Philadelphia.....	124.0	122.9	104.7	Mobile.....	131.4	130.0	112.3
Pittsburgh.....	125.0	124.1	109.0	West South Central:			
Rochester.....	125.2	125.5	110.2	Dallas.....	122.7	120.9	103.8
Scranton.....	125.5	125.3	108.8	Houston.....	130.0	128.2	109.5
East North Central:				Little Rock.....	127.6	124.7	108.2
Chicago.....	125.5	122.8	108.1	New Orleans.....	135.6	133.2	114.7
Cincinnati.....	125.8	124.2	109.0	Mountain:			
Cleveland.....	126.0	126.7	112.1	Butte.....	123.6	122.7	107.4
Columbus, Ohio.....	119.2	118.4	104.4	Denver.....	126.0	124.4	106.0
Detroit.....	123.7	125.0	107.1	Salt Lake City.....	128.8	129.2	106.9
Indianapolis.....	126.9	125.5	108.5	Pacific:			
Milwaukee.....	121.7	122.0	107.1	Los Angeles.....	136.8	133.6	109.3
Peoria.....	130.7	130.0	111.0	Portland, Oreg.....	137.8	135.2	114.3
Springfield, Ill.....	130.9	129.0	107.4	San Francisco.....	130.2	126.6	108.3
West North Central:				Seattle.....	136.1	130.9	112.2
Kansas City.....	121.2	118.3	101.8				
Minneapolis.....	122.9	122.1	110.0				
Omaha.....	121.4	119.8	105.7				
St. Louis.....	129.0	126.0	109.4				
St. Paul.....	119.7	118.9	104.7				

<sup>1</sup> Aggregate costs of 54 foods in each city, weighted to represent total purchases of families of wage earners and lower-salaried workers, have been combined for the United States with the use of population weights. Primary use is for time-to-time comparisons rather than place-to-place comparisons.

<sup>2</sup> Preliminary.

<sup>3</sup> Includes Portsmouth and Newport News.

<sup>4</sup> Revised.

### Average Annual Indexes of Retail Food Costs, 1913-41

Annual average indexes of food costs for the years 1913-41, and monthly indexes for January 1941 to August 1942, inclusive, are shown in table 5.

TABLE 5.—Indexes of Retail Food Costs in 51 Large Cities Combined, by Years, From 1913 to 1941, and by Months, January 1941 to August 1942

[1935-39=100]

Year	All-foods index	Year	All-foods index	Year and month	All-foods index	Year and month	All-foods index
1913.....	79.9	1927.....	132.3	1941.....	105.5	1942	
1914.....	81.8	1928.....	130.8			January.....	116.2
1915.....	80.9	1929.....	132.5	1941		February.....	116.8
1916.....	90.8	1930.....	126.0	January.....	97.8	March.....	118.6
1917.....	116.9	1931.....	103.9	February.....	97.9	April.....	119.6
1918.....	134.4	1932.....	86.5	March.....	98.4	May.....	121.6
1919.....	149.8	1933.....	84.1	April.....	100.6	June.....	123.2
1920.....	168.8	1934.....	93.7	May.....	102.1	July.....	124.6
1921.....	128.3	1935.....	100.4	June.....	105.9	August.....	126.1
1922.....	119.9	1936.....	101.3	July.....	106.7		
1923.....	124.0	1937.....	105.3	August.....	108.0		
1924.....	122.8	1938.....	97.8	September.....	110.7		
1925.....	132.9	1939.....	95.2	October.....	111.6		
1926.....	137.4	1940.....	96.6	November.....	113.1		
				December.....	112.1		

## Wholesale Prices

### WHOLESALE PRICES IN AUGUST 1942<sup>1</sup>

WITH further gains in primary market prices<sup>2</sup> for farm products and foods, many of which reach the peak levels of 1920 and 1929, the Bureau of Labor Statistics index of 889 series rose 0.5 percent to the highest point since October 1926. Sharp increases in prices for livestock, meats, and dairy products largely accounted for the rise which brought the all-commodity index to 99.2 percent of the 1926 average. In the past year average prices for these commodities have advanced nearly 10 percent and are more than 32 percent higher than in August 1939.

Average prices for foods increased 1.6 percent during the month and farm products rose 0.8 percent to the highest level in 13 years. Textile products advanced fractionally. The movement in prices for industrial commodities was narrow and for the most part downward. The index for miscellaneous commodities fell 1 percent as a result of lower prices for cattle feed and for paper and pulp. Revised ceiling prices for industrial fats and oils caused the chemicals and allied products group index to drop 0.5 percent. Prices were slightly lower for housefurnishing goods.

Prices for most commodities are higher than they were at this time last year, although the effect of the General Maximum Price Regulation has been definitely reflected in industrial commodity markets since its imposition early in May. The index for prices of "all commodities other than farm products and foods" is 5 percent above the August 1941 average, while farm products have advanced 21 percent and foods 15 percent in the year period. During the year period August 1941 to August 1942, prices of raw materials advanced 15 percent while semimanufactured commodities advanced 3 percent and manufactured commodities 8 percent.

Substantial price increases have occurred in most markets since the outbreak of war in August 1939. In the 3-year period farm products rose about 74 percent; foods, 50 percent; textile products, over 40 percent; hides and leather products and chemicals and allied products, nearly 30 percent; and building materials, housefurnishing goods, and miscellaneous commodities, about 20 percent. Among the outstanding increases in subgroup indexes in the past 3 years are 150 percent for industrial fats and oils; over 80 percent for livestock and poultry and cattle feed; more than 70 percent for grains and cotton

<sup>1</sup> During the period of rapid changes caused by price controls, materials allocation, and rationing the Bureau of Labor Statistics will attempt promptly to report changing prices. Indexes marked (\*), however, must be considered as preliminary and subject to such adjustment and revision as required by later and more complete reports.

<sup>2</sup> The Bureau of Labor Statistics wholesale price data for the most part represent prices prevailing in the "first commercial transaction." They are prices quoted in primary markets, at principal distribution points.



goods; over 60 percent for "other farm products," fruits and vegetables, and drugs and pharmaceuticals; and 50 percent for meats, "other foods," hides and skins, and "other textile products."

Sharp increases in prices for livestock, now more than 22 percent above the 1926 level, largely accounted for the advance in the farm products group index. Steers were up over 10 percent; live poultry, about 7 percent; cows, 5 percent; and calves, 4 percent. Sheep and hogs were 1 to 3 percent higher. Higher prices were also reported for barley, oats, and wheat, for eggs and milk, and for hops, peanuts, oranges, tobacco, and wool. Quotations were lower for corn, rye, and cotton, for flaxseed and hay, and for most fruits and vegetables.

Marked advances in prices for dairy products, particularly butter, cheese, and concentrated milk, for flour and corn meal, and for meats—largely mutton and dressed poultry—were mainly responsible for the rise in average prices for foods in primary markets. Smaller increases were reported in prices for fresh beef, fresh and cured pork, lard, and pepper. Prices were lower for rice because of Office of Price Administration action; and lamb, bacon, veal, and certain vegetable oils also declined.

A slight drop in prices for Brazilian goatskins did not affect the index for the hides and leather products group. The textile products markets were relatively steady during the month. Higher prices were quoted for men's overcoats. Prices for certain cotton textiles declined slightly with lower quotations for denim and sateen. Toweling advanced as a result of an upward revision in ceiling prices by Office of Price Administration.

The movement in prices for petroleum products was mixed. Gasoline in the Oklahoma and Texas regions advanced while kerosene and California gasoline declined.

In the building materials group higher prices for certain types of lumber were offset by lower prices for paint materials, such as chrome colors, tung and linseed oils, rosin, and turpentine.

Prices were lower for fatty acids, for pine oil and tallow, for synthetic camphor, and for certain fertilizer materials, particularly cottonseed meal and sulphate of ammonia.

Average prices for cattle feed dropped 8 percent during August. Wrapping paper, boxboard, and soap also declined.

Percentage comparisons of the August 1942 level of wholesale prices with July 1942, August 1941, and August 1939 with corresponding index numbers are given in table 1.

TABLE 1.—Index Numbers of Wholesale Prices by Groups and Subgroups of Commodities, August 1942, With Comparisons for July 1942, August 1941, and August 1939

[1926=100]

Group and subgroup	August 1942	July 1942	Per- cent of change	August 1941	Per- cent of change	August 1939	Per- cent of change
All commodities.....	*99.2	*98.7	+0.5	90.3	+9.9	75.0	+32.3
Farm products.....	106.1	105.3	+ .8	87.4	+21.4	61.0	+73.9
Grains.....	89.8	89.1	+ .8	79.6	+12.8	51.5	+74.4
Livestock and poultry.....	122.6	117.8	+4.1	99.0	+23.8	66.0	+85.8
Other farm products.....	99.9	101.5	-1.6	82.0	+21.8	60.1	+66.2

\* Preliminary.

TABLE 1.—Index Numbers of Wholesale Prices by Groups and Subgroups of Commodities, August 1942, With Comparisons for July 1942, August 1941, and August 1939—Con.

Group and subgroup	August 1942	July 1942	Per- cent of change	August 1941	Per- cent of change	August 1939	Per- cent of change
<b>Foods</b> .....	100.8	99.2	+1.6	87.2	+15.6	67.2	+50.0
Dairy products.....	100.2	96.0	+4.4	90.3	+11.0	67.9	+47.6
Cereal products.....	87.8	87.2	+7	81.5	+7.7	71.9	+22.1
Fruits and vegetables.....	98.0	98.5	-.5	70.3	+39.4	58.5	+67.5
Meats.....	115.2	113.4	+1.6	97.5	+18.2	73.7	+56.3
Other foods.....	93.1	91.9	+1.3	84.4	+10.3	60.3	+54.4
<b>Hides and leather products</b> .....	118.2	118.2	0	110.2	+7.3	92.7	+27.5
Shoes.....	126.4	126.4	0	116.1	+8.9	100.8	+25.4
Hides and skins.....	118.8	118.5	+3	112.2	+5.9	77.2	+53.9
Leather.....	101.3	101.3	0	98.5	+2.8	84.0	+20.6
Other leather products.....	115.2	115.2	0	103.7	+11.1	97.1	+18.6
<b>Textile products</b> .....	97.3	97.1	+2	88.3	+10.2	67.8	+43.5
Clothing.....	107.2	107.2	0	95.1	+12.7	81.5	+31.5
Cotton goods.....	112.9	112.7	+2	101.5	+11.2	65.5	+72.4
Hosiery and underwear.....	69.7	69.7	0	63.8	+9.2	61.5	+13.3
Rayon.....	30.3	30.3	0	29.5	+2.7	28.5	+6.3
Silk.....	(1)	(1)	-----	(1)	-----	44.3	-----
Woolen and worsted goods.....	111.7	111.0	+6	98.2	+13.7	75.5	+47.9
Other textile products.....	97.9	98.2	-.3	96.8	+1.1	63.7	+53.7
<b>Fuel and lighting materials</b> .....	79.0	79.0	0	79.0	0	72.6	+8.8
Anthracite.....	85.7	85.7	0	83.3	+2.9	72.1	+18.9
Bituminous coal.....	110.0	109.8	+2	106.3	+3.5	96.0	+14.6
Coke.....	122.1	122.1	0	122.2	-.1	104.2	+17.2
Electricity.....	(1)	(1)	-----	66.4	-----	75.8	-----
Gas.....	(1)	81.4	-----	78.3	-----	86.7	-----
Petroleum and products.....	60.7	60.6	+2	61.4	-1.1	51.7	+17.4
<b>Metals and metal products</b> .....	*103.8	*103.8	0	98.6	+5.3	93.2	+11.4
Agricultural implements.....	96.9	96.9	0	92.9	+4.3	93.5	+3.6
Farm machinery.....	98.0	98.0	0	93.9	+4.4	94.7	+3.5
Iron and steel.....	97.2	97.2	0	96.9	+3	95.1	+2.2
Motor vehicles.....	*112.8	*112.8	0	100.4	+12.4	92.5	+21.9
Nonferrous metals.....	85.6	85.6	0	84.4	+1.4	74.6	+14.7
Plumbing and heating.....	94.1	94.1	0	86.8	+8.4	79.3	+18.7
<b>Building materials</b> .....	110.3	110.3	0	105.5	+4.5	89.6	+23.1
Brick and tile.....	98.7	98.0	+7	95.1	+3.8	90.5	+9.1
Cement.....	94.2	94.2	0	92.1	+2.3	91.3	+3.2
Lumber.....	133.0	132.9	+1	127.5	+4.3	90.1	+47.6
Paint and paint materials.....	100.1	100.7	-.6	93.3	+7.3	82.1	+21.9
Plumbing and heating.....	94.1	94.1	0	86.8	+8.4	79.3	+18.7
Structural steel.....	107.3	107.3	0	107.3	0	107.3	0
Other building materials.....	103.8	103.8	0	99.9	+3.9	89.5	+16.0
<b>Chemicals and allied products</b> .....	96.2	96.7	-.5	86.0	+11.9	74.2	+29.6
Chemicals.....	96.3	96.5	-.2	87.5	+10.1	83.8	+14.9
Drugs and pharmaceuticals.....	129.0	129.1	-.1	100.1	+28.9	77.1	+67.3
Fertilizer materials.....	78.3	78.5	-.3	75.3	+4.0	65.5	+19.5
Mixed fertilizers.....	82.8	82.8	0	77.1	+7.4	73.1	+13.3
Oils and fats.....	101.6	104.2	-2.5	87.3	+16.4	40.6	+150.2
<b>Housefurnishing goods</b> .....	102.7	102.8	-.1	95.4	+7.7	85.6	+20.0
Furnishings.....	107.9	108.0	-.1	100.7	+7.1	90.0	+19.9
Furniture.....	97.4	97.5	-.1	89.9	+8.3	81.1	+20.1
<b>Miscellaneous</b> .....	88.9	89.8	-1.0	83.7	+6.2	73.3	+21.3
Automobile tires and tubes.....	73.0	73.0	0	60.8	+20.1	60.5	+20.7
Cattle feed.....	125.4	136.3	-8.0	108.8	+15.3	68.4	+83.3
Paper and pulp.....	98.9	100.5	-1.6	100.7	-1.8	80.0	+23.6
Rubber, crude.....	46.3	46.3	0	47.8	-3.1	34.9	+32.7
Other miscellaneous.....	93.0	93.3	-.3	89.8	+3.6	81.3	+14.4
<b>Raw materials</b> .....	101.2	100.1	+1.1	87.6	+15.5	66.5	+52.2
Semimanufactured articles.....	92.7	92.8	-.1	89.5	+3.6	74.5	+24.4
Manufactured products.....	*98.9	*98.6	+3	91.5	+8.1	79.1	+25.0
All commodities other than farm products.....	*97.5	*97.0	+5	90.7	+7.5	77.9	+25.2
All commodities other than farm products and foods.....	*95.6	*95.7	-.1	90.8	+5.3	80.1	+19.4

\*Preliminary.

† Data not available.

## Index Numbers by Commodity Groups, 1926 to August 1942

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1941, inclusive, and by months from August 1941 to August 1942, inclusive, are shown in table 2.

TABLE 2.—Index Numbers of Wholesale Prices by Groups of Commodities

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous	All commodities
1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929.....	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	95.3
1932.....	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	64.8
1933.....	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	65.9
1937.....	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	86.3
1938.....	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.0	86.8	73.3	78.6
1939.....	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	77.1
1940.....	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	78.6
1941.....	82.4	82.7	108.3	84.8	76.2	99.4	103.2	84.6	94.3	82.0	87.3
1941: August.....	87.4	87.2	110.2	88.3	79.0	98.6	105.5	86.0	95.4	83.7	90.3
September.....	91.0	89.5	111.3	89.7	79.2	98.6	106.4	87.4	97.2	85.1	91.8
October.....	90.0	88.9	112.6	90.9	79.6	103.1	107.3	89.7	99.5	86.4	92.4
November.....	90.6	89.3	114.1	91.1	78.8	103.3	107.5	89.8	100.6	87.3	92.5
December.....	94.7	90.5	114.8	91.8	78.4	103.3	107.8	91.3	101.1	87.6	93.6
1942: January.....	100.8	93.7	114.9	93.6	78.2	103.5	109.3	96.0	102.4	89.3	96.0
February.....	101.3	94.6	115.3	95.2	78.0	103.6	110.1	97.0	102.5	89.3	96.7
March.....	102.8	96.1	116.7	96.6	77.7	103.8	110.5	97.1	102.6	89.7	97.6
April.....	104.5	98.7	119.2	97.7	77.7	103.8	110.2	97.1	102.8	90.3	98.7
May.....	104.4	98.9	118.8	98.0	78.0	103.9	110.1	97.3	102.9	90.5	98.8
June.....	104.4	99.3	118.2	97.6	78.4	103.9	110.1	97.2	102.9	90.2	98.6
July.....	105.3	99.2	118.2	97.1	79.0	103.8	110.3	96.7	102.8	89.8	98.7
August.....	106.1	100.8	118.2	97.3	79.0	103.8	110.3	96.2	102.7	88.9	99.2

¹ Preliminary.

TABLE 3.—Index Numbers of Wholesale Prices by Special Groups of Commodities

[1926=100]

Year and month	Raw materials	Semi-manufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods	Year and month	Raw materials	Semi-manufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
1926.....	100.0	100.0	100.0	100.0	100.0	1941—Continued.					
1929.....	97.5	93.9	94.5	93.3	91.6	October.....	89.7	89.9	93.9	92.8	93.4
1932.....	55.1	59.3	70.3	68.3	70.2	November.....	90.2	89.7	93.8	92.7	93.5
1933.....	56.5	65.4	70.5	69.0	71.2	December.....	92.3	90.1	94.6	93.3	93.7
1937.....	84.8	85.3	87.2	86.2	85.3	1942:					
1938.....	72.0	75.4	82.2	80.6	81.7	January.....	96.1	91.7	96.4	94.8	94.6
1939.....	70.2	77.0	80.4	79.5	81.3	February.....	97.0	92.0	97.0	95.5	94.9
1940.....	71.9	79.1	81.6	80.8	83.0	March.....	98.2	92.3	97.8	96.2	95.2
1941.....	83.5	86.9	89.1	88.3	89.0	April.....	100.0	92.8	98.7	97.2	95.6
1941: August.....	87.6	89.5	91.5	90.7	90.8	May.....	99.7	92.9	99.0	97.4	95.7
September.....	90.0	90.3	92.8	91.9	91.6	June.....	99.8	92.8	98.6	97.1	95.6
						July.....	100.1	92.8	98.6	97.0	95.7
						August.....	101.2	92.7	98.9	97.5	95.6

¹ Preliminary.



The price trend for specified years and months since 1926 is shown in table 3 for the following groups of commodities: Raw materials, semimanufactured articles, manufactured products, commodities other than farm products, and commodities other than farm products and foods. The list of commodities included under the classifications "raw materials," "semimanufactured articles," and "manufactured products" was shown on pages 10 to 12 of Wholesale Prices, December and Year 1941 (Serial No. R. 1434).

### Weekly Fluctuations

Weekly changes in wholesale prices by groups of commodities during July and August 1942 are shown by the index numbers in table 4. These indexes are not averaged to obtain an index for the month but are computed only to indicate the fluctuations from week to week.

TABLE 4.—Weekly Index Numbers of Wholesale Prices by Commodity Groups, July and August 1942

[1926=100]

Commodity group	Aug. 29	Aug. 22	Aug. 15	Aug. 8	Aug. 1	July 25	July 18	July 11	July 4
All commodities.....	198.9	198.9	198.9	198.6	198.6	198.4	198.3	198.5	198.5
Farm products.....	106.0	106.4	106.0	105.4	105.6	105.4	104.9	105.5	104.9
Foods.....	100.7	100.8	100.5	99.7	100.1	98.9	98.3	98.7	99.3
Hides and leather products.....	118.9	118.9	118.8	118.8	118.8	118.8	118.8	118.9	118.9
Textile products.....	96.6	96.5	96.5	96.5	96.5	96.8	96.8	96.8	97.3
Fuel and lighting materials.....	79.6	79.6	79.7	79.6	79.6	79.5	79.6	79.5	79.5
Metals and metal products.....	1103.9	1103.9	1103.9	1103.9	1103.9	1103.9	1103.9	1104.0	1104.0
Building materials.....	110.3	110.3	110.2	110.2	110.0	110.1	110.2	110.3	110.6
Chemicals and allied products.....	96.2	96.2	96.3	96.3	96.4	96.4	97.2	97.2	97.2
Housefurnishing goods.....	104.1	104.1	104.1	104.4	104.4	104.4	104.4	104.5	104.5
Miscellaneous.....	88.6	88.6	89.0	88.9	89.1	89.6	89.6	90.0	90.1
Raw materials.....	100.8	101.0	100.8	100.4	100.5	99.8	99.5	99.8	99.9
Semimanufactured articles.....	92.6	92.6	92.6	92.6	92.6	92.6	92.8	92.8	92.8
Manufactured products.....	199.2	199.1	199.1	198.9	198.8	198.8	198.7	198.9	198.9
All commodities other than farm products.....	197.4	197.3	197.3	197.2	197.1	196.9	196.9	197.0	197.2
All commodities other than farm products and foods.....	195.7	195.7	195.8	195.7	195.8	195.9	195.9	196.0	196.1

1 Preliminary.

# *Trend of Employment and Unemployment*

## SUMMARY OF REPORTS OF EMPLOYMENT FOR AUGUST 1942

EMPLOYMENT in nonagricultural establishments aggregated 37,789,000 in August 1942. This figure, which exceeded the level of all preceding months, was 555,000 greater than the July 1942 total and 2,332,000 above the August 1941 level. These estimates do not include proprietors of unincorporated businesses, self-employed persons, unpaid family workers, domestics employed in private homes, employees on vessels, personnel of the WPA, NYA, and CCC, and the uniformed personnel of the Army, the Navy, the Marine Corps, and the Coast Guard. They are based on preliminary August and revised July reports.

The rise of 337,000 in factory employment continued the virtually unbroken succession of increases reported since June 1940, the beginning of the defense program, and brought to nearly 4,700,000 the total number of workers added to factory employment during this period.

Employment in Federal, State, and local government services increased by 205,000 over the month, due chiefly to expansion in the War Department. Employment on construction work increased by 23,000 and in the transportation and public-utility group by 14,000. A decline of 13,000 in the wholesale and retail trade group continued the series of monthly decreases which began in April and which reflected the effect of Government restrictions on the production and sale of civilian goods. The mining group showed a net decline of 5,000 workers, the largest reduction having occurred in metal mining as employment fell off in copper, lead, zinc, gold, and silver mines. The finance, service, and miscellaneous group reported 6,000 fewer workers.

The major portion of the increase in nonagricultural establishments over the year interval occurred in factory employment (1,641,000). In the Federal, State, and local government services the increases since August 1941 amounted to 1,019,000, as workers were added to pay rolls in Government arsenals, navy yards, the War Department, and other war agencies. Smaller gains were shown in the transportation and public-utility group (132,000) and finance, service, and miscellaneous group (49,000). The largest decline over the year interval was reported for trade employment (406,000). The reduction in mining employment was 61,000 and in contract construction and Federal force-account construction, 42,000.

The declines in nonsupervisory personnel of the NYA, WPA, and CCC were 27,000, 77,900, and 1,800, respectively.

*Industrial and Business Employment*

Increases in employment between mid-July and mid-August were reported by 86 of the 157 manufacturing, and by 3 of the 16 nonmanufacturing, industries surveyed monthly by the Bureau of Labor Statistics. Gains in pay rolls occurred in 118 of the manufacturing, and 8 of the nonmanufacturing, industries.

As industry continued to strive for greater production of war goods the number of wage earners in the manufacturing industries increased by 2.5 percent and their weekly wages increased by 4.7 percent. These gains were much larger than the seasonally expected increases of 1.5 percent in employment and 3.1 percent in pay rolls, and exceeded the rises of all months since June 1941.

The increases in the durable-goods manufacturing group of 2.6 percent in employment and 5.1 percent in weekly pay rolls were due primarily to expansion in such industries as shipbuilding; aircraft; radios; instruments; engines; automobiles; brass, bronze, and copper products; electrical machinery; ammunition; explosives; and machine tools. The gain of 3.3 percent in the automobile industry was the fourth successive monthly expansion, indicating continued increases in the production of war materials.

In the nondurable-goods group the increase in employment of 2.1 percent was due chiefly to seasonal gains in canning and preserving; women's clothing; men's clothing; millinery; and confectionery. The beverage industry reported a substantial employment gain and the rubber tire and tube industry a further rise of 4.0 percent. The increase in the latter industry was the fourth consecutive monthly rise and reflected production on Government orders.

Among industries reporting employment declines due primarily to material shortages and freeze orders were cast-iron pipe; plumbers' supplies; stoves; business machines; fur-felt hats; and silk and rayon goods. The August over-all factory employment and pay-roll indexes were higher than those reported for any previous month and exceeded the August 1941 levels by 9.6 and 35.5 percent, respectively. As emphasized in previous reports, the gains in pay rolls over the year interval were much larger than in employment due primarily to increases in the number of hours worked, to overtime premiums, and to increases in basic wage rates.

Retail trade as a whole showed a net employment loss of 0.9 percent between mid-July and mid-August and a decline of 7.6 percent between August 1941 and August 1942. Retail stores engaged in general merchandising reported a slight employment increase over the month interval, while food and apparel stores reported employment declines. Dealers in furniture, automobiles and automobile supplies, and lumber and building materials also reported employment reductions, reflecting the adverse effect of the war program. In wholesale trade employment remained at about the same level as in the preceding month, with losses in such major lines as food products, petroleum and petroleum products, and machinery equipment and supplies, offsetting gains reported by dealers in groceries and food specialties, dry goods and apparel, and farm products.



Metal-mining employment fell off 1.2 percent over the month, due primarily to reductions in copper, lead, zinc, gold, and silver mining. Operators of iron mines increased their forces by 1.0 percent. In the remaining 4 major mining industries employment declines ranged from 0.4 percent in quarrying and nonmetallic mining to 0.8 percent in bituminous-coal mining. Compared with August 1941 employment in metal mines showed an increase of less than 1 percent, while anthracite and bituminous-coal mines reported reductions of 6.7 and 0.4 percent, respectively; quarrying and nonmetallic mines, a reduction of 4.7 percent; and crude-oil producers, a reduction of 8.6 percent. In the public utilities slight employment gains reported in August by telephone and telegraph companies and street-railway and bus companies were offset by a decline of 1.2 percent in the electric light and power industry, which was affected by Government restrictions on the use of materials. The gains of 7.5 percent in employment and 19.2 percent in pay rolls since August 1941 in the street-railway and bus industry reflected an increased demand for public transportation as well as wage-rate increases. Larger-than-seasonal employment declines were reported in the dyeing and cleaning industry (2.6 percent), laundries (1.4 percent), and year-round hotels (1.3 percent). Brokerage and insurance firms reported employment reductions of 2.9 percent and 0.5 percent, respectively.

A preliminary report of the Interstate Commerce Commission for class I steam railroads showed an employment increase of 0.5 percent between July and August, the total number employed in August being 1,322,435. Corresponding pay-roll figures for August were not available when this report was prepared. For July they were \$253,265,648, an increase of \$9,028,713 since June.

*Hours and earnings.*—Average hours worked per week by manufacturing wage earners were 42.8 in August, an increase of 1.0 percent since July. The corresponding average hourly earnings were 86.2 cents, an increase of 1.5 percent over the preceding month. The average weekly earnings of factory wage earners (both full- and part-time combined) were \$39.42, an increase of 2.2 percent since July. Of the 16 nonmanufacturing industries regularly surveyed, 12 reported increases in average weekly earnings. Of the 14 nonmanufacturing industries for which man-hour information is available, 9 showed increases in average hours worked per week and all showed gains in average hourly earnings.

Wage-rate increases between July 16 and August 15, averaging 7.7 percent and affecting 832,000 factory wage earners, were reported by 1,350 manufacturing establishments out of a reporting sample of about 35,000 establishments employing 9,100,000 workers. Among industries in which substantial numbers of wage earners received increases were shipbuilding, cotton goods, and steel. In nonmanufacturing industries the largest number of workers affected by wage-rate increases was reported by public utilities.

Employment and pay-roll indexes and average weekly earnings for July and August 1942 and August 1941 are given where available in table 1 for all manufacturing industries combined, selected nonmanufacturing industries, water transportation, and class I steam railroads.

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TABLE 1.—*Employment, Pay Rolls, and Earnings in All Manufacturing Industries Combined and in Nonmanufacturing Industries, August and July 1942 and August 1941*

[Preliminary figures]

Industry	Employment index			Pay-roll index			Average weekly earnings		
	August 1942	July 1942	August 1941	August 1942	July 1942	August 1941	August 1942	July 1942	August 1941
All manufacturing industries combined.....	(1923-25=100) 145.9   142.4   133.1			(1923-25=100) 214.2   204.6   158.1			\$39.42	\$38.56	\$31.66
Class I steam railroads <sup>1</sup> .....	(1935-39=100) 129.6   129.0   118.3			(1935-39=100) ( <sup>2</sup> )   ( <sup>2</sup> )   ( <sup>2</sup> )			( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Coal mining:	(1929=100)			(1929=100)					
Anthracite.....	46.7	46.9	50.0	48.1	45.9	51.1	33.80	32.06	33.56
Bituminous.....	92.2	93.0	92.6	120.5	112.7	117.3	34.69	32.18	33.85
Metalliferous mining.....	80.6	81.5	79.9	105.4	101.6	85.4	40.83	38.90	33.68
Quarrying and nonmetallic mining.....	51.4	51.6	53.9	66.8	65.9	59.3	32.32	31.76	27.91
Crude-petroleum production.....	56.9	57.2	62.2	63.2	62.4	61.5	39.63	39.88	36.26
Public utilities:									
Telephone and telegraph.....	93.9	93.5	89.6	126.8	126.0	116.4	33.02	32.96	31.75
Electric light and power.....	85.7	86.7	95.2	112.6	113.0	115.1	40.02	39.67	36.75
Street railways and busses.....	75.0	74.8	60.7	93.7	91.0	78.6	40.69	39.69	36.67
Trade:									
Wholesale.....	89.8	89.7	95.8	91.3	91.3	89.8	35.30	35.35	32.60
Retail.....	89.5	90.3	96.9	91.4	91.8	94.0	23.57	23.57	22.43
Hotels (year-round) <sup>3</sup> .....	93.3	94.4	94.4	97.2	96.5	88.2	17.96	17.58	16.13
Laundries.....	117.5	119.1	114.6	116.9	117.8	104.7	20.78	20.66	18.94
Dyeing and cleaning.....	123.6	126.9	118.9	105.6	109.2	92.1	23.87	24.04	21.44
Brokerage <sup>4</sup> .....	-2.9	-5.3	-21.3	-4.0	-3.8	-20.4	40.75	41.22	39.47
Insurance <sup>4</sup> .....	-5	+5	-1.5	-1.6	+9	+3.0	37.67	38.07	37.33
Building construction <sup>4</sup> .....	-3.1	-4.2	-28.1	-2.2	-3.2	-12.3	43.79	43.42	35.76
Water transportation <sup>4</sup> .....	69.4	70.4	79.3	+4	-4.8	+40.5	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )

<sup>1</sup> Preliminary; source—Interstate Commerce Commission.<sup>2</sup> Not available.<sup>3</sup> Cash payments only; additional value of board, room, and tips cannot be computed.<sup>4</sup> Indexes of employment and pay rolls not available. Percentage changes from July to August 1942, June to July 1942, and August 1941 to August 1942 substituted.<sup>5</sup> Based on estimates prepared by the U. S. Maritime Commission covering steam and motor merchant vessels of 1,000 gross tons or over in deep-sea trades only. Pay-roll data include war bonuses and value of subsistence and lodging. Pay-roll indexes on 1929 base not available. Percentage changes from July to August 1942, June to July 1942, and August 1941 to August 1942 substituted.

### Public Employment

In August the Federal Government employed 194,000 additional persons of whom less than 1,000 were hired for work inside the District of Columbia. Of the 193,000 hired for work outside the District most were employed by the War Department. Total Federal executive-service employment in August was 2,572,000—1,127,000 more than a year ago. Pay rolls for the executive service rose \$35,239,000 in August and \$204,490,000 during the year, to a total of \$422,262,000.

Construction financed wholly or partially from Federal funds showed a contraseasonal pattern by adding 95,000 workers from mid-July to mid-August. War projects, mainly housing, shipbuilding, and construction of aviation facilities, employed 90,000 of these additional workers, while nonwar projects, mainly river, harbor, and flood control projects, employed 5,000. These increases brought the total construction and shipbuilding employment in August to over 2,000,000, an increase over a year ago of 1,158,000. Workers on the direct pay roll of the Federal Government whose employment will terminate at the close of the project on which they are engaged, numbered 268,000; the other workers were employed by contractors and subcontractors.

Employment on the war production training program (formerly a work-relief program known as the "out-of-school work program") of the National Youth Administration amounted in August to 97,000, a decline of 26,900 since July and of 222,000 since August a year ago. The student-work program of the NYA was closed for the summer-vacation period and employed no workers in July and August.

Personnel on the 2 work-relief programs—WPA and CCC—declined 83,100 during the month of August and 792,000 during the past year. Pay-roll declines for the corresponding periods were \$11,992,000 and \$39,419,000. In August, personnel on the WPA totaled 447,000 and on the CCC, 6,500.

TABLE 2.—*Employment and Pay Rolls in Regular Federal Services and on Projects Financed Wholly or Partially From Federal Funds, August 1941 and July and August 1942*

[Subject to revision]

Class	Employment			Pay rolls		
	August 1942	July 1942	August 1941	August 1942	July 1942	August 1941
Federal services:						
Executive <sup>1</sup> .....	2,571,551	2,377,955	1,444,985	\$422,262,346	\$387,023,523	\$217,772,054
Judicial.....	2,662	2,653	2,578	672,355	672,070	641,349
Legislative.....	6,485	6,526	6,048	1,358,154	1,368,607	1,334,808
Construction projects:						
Financed from regular Federal appropriations <sup>2</sup> .....	1,812,277	1,773,321	737,113	356,257,489	344,155,600	119,442,921
War.....	1,694,234	1,660,038	573,489	336,699,768	324,383,462	99,089,786
Other.....	118,043	113,283	163,624	19,557,721	19,772,138	20,353,135
Public housing <sup>4</sup> .....	79,820	65,900	90,074	12,086,344	10,301,488	12,048,823
War public works.....	8,540	7,603	( <sup>5</sup> )	1,030,692	917,637	( <sup>6</sup> )
Financed by PWA.....	51	77	5,110	7,149	10,794	672,435
Financed by RFC <sup>6</sup> .....	102,465	60,943	12,859	17,632,471	12,923,220	2,383,076
War.....	100,248	59,149	10,122	17,240,298	12,561,357	2,005,029
Other.....	2,217	1,794	2,737	392,173	361,863	378,047
Other programs:						
National Youth Administration.....	97,000	123,940	318,726	3,042,400	3,349,000	7,565,989
Student work program.....			338			1,350
War production training program <sup>7</sup> .....	97,000	123,940	318,388	3,042,400	3,349,000	7,564,639
Work Projects Administration projects.....	447,266	525,146	1,042,555	31,603,000	42,499,000	62,082,824
War.....	167,746	241,504	349,719	12,391,000	19,234,000	20,783,449
Other.....	279,520	283,642	692,836	19,212,000	23,265,000	41,299,375
Civilian Conservation Corps.....	6,461	11,674	203,261	1,046,463	2,142,856	9,985,843

<sup>1</sup> Includes force-account employees also included under construction projects, and supervisory and technical employees also included under CCC. Data for public employment offices, which were federalized in January 1942, are included in July and August 1942.

<sup>2</sup> Includes employment and estimated pay roll for the Transportation Service of the War Department.

<sup>3</sup> Includes new Federal ship construction.

<sup>4</sup> Includes all Federal housing projects, including those formerly under the United States Housing Authority.

<sup>5</sup> Program not in operation.

<sup>6</sup> Includes employees and pay roll of the RFC Mortgage Co.

<sup>7</sup> Called out-of-school work program prior to July 1942. Beginning July 1942, the National Youth Administration is considered a training program for war work rather than a work-relief program.



# DETAILED REPORTS FOR INDUSTRIAL AND BUSINESS EMPLOYMENT, JULY 1942

## *Estimates of Nonagricultural Employment*

REVISED estimates of "civil employees in nonagricultural establishments" from January 1939 to July 1942 are given in table 1. With the exception of the trade and finance-service-miscellaneous groups, which have not yet been revised, they are not comparable with previously published estimates for the period 1929 to 1939. Necessary revisions for these earlier years will, however, be made at a later date.

TABLE 1.—*Revised Estimates of Civil Employees in Nonagricultural Establishments in the United States, by Industry Division*

[In thousands]

Month and year	Total	Manu- factur- ing	Mining	Con- struc- tion <sup>1</sup>	Transpor- tation and public utilities	Trade	Finance, service, and mis- cellaneous	Federal, State, and local govern- ment
1939 average.....	29,757	10,078	845	1,421	2,924	6,478	4,045	3,968
1940 average.....	30,992	10,780	916	1,507	3,030	6,591	4,095	4,072
1941 average.....	34,409	12,816	928	1,976	3,265	6,869	4,212	4,343
<i>1939</i>								
January.....	28,364	9,535	879	1,160	2,795	6,186	3,913	3,896
February.....	28,524	9,671	875	1,145	2,800	6,172	3,921	3,940
March.....	28,836	9,787	875	1,196	2,823	6,259	3,949	3,947
April.....	28,924	9,787	590	1,360	2,858	6,367	4,023	3,939
May.....	29,277	9,732	701	1,511	2,886	6,410	4,073	3,964
June.....	29,676	9,775	841	1,595	2,948	6,471	4,108	3,938
July.....	29,665	9,817	836	1,644	2,955	6,399	4,112	3,902
August.....	29,955	10,117	853	1,587	2,962	6,404	4,109	3,923
September.....	30,717	10,489	883	1,571	3,006	6,589	4,147	4,032
October.....	31,110	10,780	931	1,527	3,064	6,672	4,085	4,051
November.....	30,932	10,746	943	1,446	3,021	6,705	4,048	4,023
December.....	31,109	10,694	928	1,304	2,970	7,102	4,053	4,058
<i>1940</i>								
January.....	29,744	10,453	918	1,068	2,936	6,379	4,006	3,984
February.....	29,713	10,475	916	1,036	2,945	6,338	4,011	3,992
March.....	29,966	10,439	916	1,106	2,943	6,518	4,026	4,018
April.....	30,025	10,343	899	1,285	2,968	6,435	4,086	4,009
May.....	30,369	10,298	902	1,476	3,016	6,514	4,126	4,037
June.....	30,619	10,353	894	1,574	3,048	6,570	4,137	4,043
July.....	30,638	10,411	907	1,660	3,059	6,462	4,140	3,999
August.....	31,190	10,830	919	1,696	3,080	6,481	4,147	4,037
September.....	31,933	11,182	926	1,729	3,105	6,643	4,174	4,174
October.....	32,276	11,405	934	1,802	3,121	6,706	4,105	4,203
November.....	32,441	11,523	934	1,840	3,082	6,795	4,088	4,179
December.....	32,984	11,647	931	1,815	3,057	7,247	4,099	4,188
<i>1941</i>								
January.....	31,923	11,585	924	1,738	3,021	6,487	4,063	4,105
February.....	32,276	11,823	921	1,801	3,031	6,491	4,075	4,134
March.....	32,674	12,034	932	1,776	3,080	6,578	4,097	4,177
April.....	33,134	12,297	626	1,859	3,163	6,792	4,174	4,223
May.....	33,896	12,518	929	1,920	3,245	6,753	4,235	4,296
June.....	34,480	12,809	941	1,987	3,308	6,861	4,260	4,314
July.....	34,939	13,087	961	2,100	3,362	6,837	4,300	4,292
August.....	35,457	13,337	979	2,173	3,401	6,897	4,300	4,370
September.....	36,056	13,571	984	2,184	3,418	7,008	4,325	4,566
October.....	36,053	13,597	988	2,204	3,424	7,070	4,256	4,514
November.....	35,926	13,563	980	2,091	3,382	7,146	4,229	4,535
December.....	36,088	13,566	976	1,880	3,344	7,511	4,227	4,584
<i>1942</i>								
January.....	34,876	13,468	965	1,662	3,288	6,756	4,179	4,558
February.....	35,062	13,693	947	1,594	3,270	6,686	4,180	4,692
March.....	35,411	13,859	933	1,625	3,295	6,711	4,194	4,794
April.....	35,998	14,109	929	1,771	3,389	6,679	4,265	4,856
May.....	36,346	14,133	928	1,909	3,442	6,667	4,309	4,958
June.....	36,666	14,302	921	1,991	3,485	6,606	4,324	5,037
July.....	37,144	14,602	924	2,061	3,516	6,506	4,361	5,174

<sup>1</sup> Includes Federal force-account construction employment, but not private force-account work.

The revised estimates are based on reports of employers to the United States Bureau of Labor Statistics; on data made available by the Bureau of Employment Security of the Social Security Board and the Bureau of Old-Age and Survivors Insurance, covering employment figures reported under the State Unemployment Compensation programs and the Federal Old-Age and Survivors Insurance System; and on data of other Government agencies, such as Interstate Commerce Commission, Civil Service Commission, and the Bureau of the Census. They do not include military personnel or emergency employment such as WPA, NYA, and CCC. Proprietors, self-employed persons, unpaid family workers, and domestics are excluded.

Estimates of "total nonagricultural employment" have been discontinued, as they have recently been made available through the WPA Monthly Survey of Employment and Unemployment, now under the jurisdiction of the Department of Commerce, Bureau of the Census.

Estimates of "employees in nonagricultural establishments" by States are given each month in the Bureau of Labor Statistics' mimeographed release on employment and pay rolls.

### *Industrial and Business Employment*

Monthly reports on employment and pay rolls are available for 157 manufacturing industries; 16 nonmanufacturing industries, including private building construction; water transportation and class I steam railroads. The reports for the first 2 of these groups—manufacturing and nonmanufacturing—are based on sample surveys by the Bureau of Labor Statistics. The figures on water transportation are based on estimates prepared by the Maritime Commission, and those on class I steam railroads are compiled by the Interstate Commerce Commission.

The employment, pay-roll, hours, and earnings figures for manufacturing, mining, laundries, and dyeing and cleaning cover wage earners only, but the figures for public utilities, brokerage, insurance, and hotels relate to all employees except corporation officers and executives, while for trade they relate to all employees except corporation officers, executives, and other employees whose duties are mainly supervisory. For crude-petroleum production they cover wage earners and clerical field force. The coverage of the reporting samples for the various nonmanufacturing industries ranges from approximately 25 percent for wholesale and retail trade, dyeing and cleaning, and insurance, to approximately 80 percent for public utilities, and 90 percent for mining.

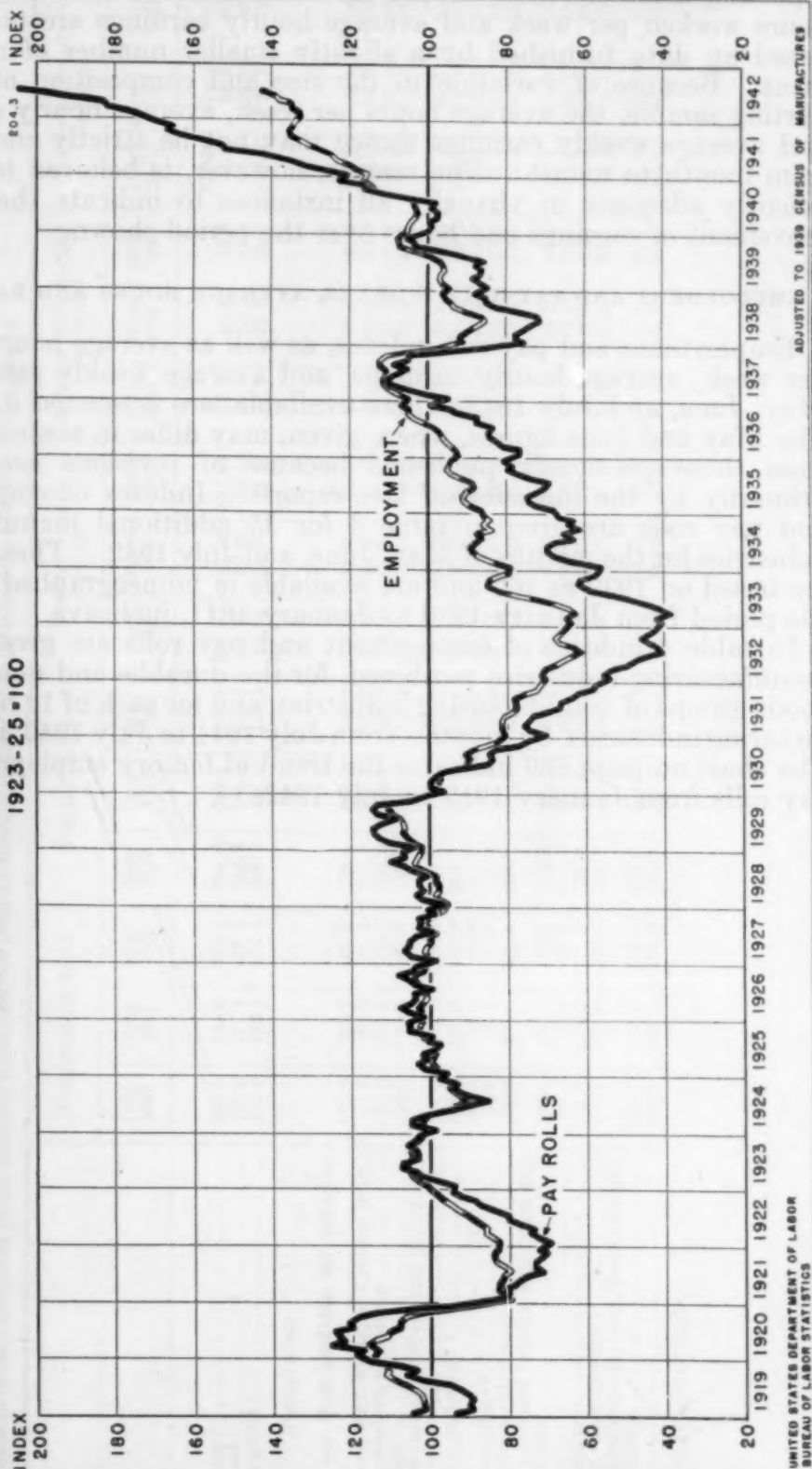
The general manufacturing indexes are computed from reports supplied by representative manufacturing establishments in 90 of the 157 industries surveyed. These reports cover more than 55 percent of the total wage earners in all manufacturing industries of the country and more than 65 percent of the wage earners in the 90 industries covered.

Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and the amount of pay rolls for the pay period ending nearest the 15th of the month.

The average weekly earnings shown in table 2 are computed by dividing the weekly pay rolls in the reporting establishments by the

EMPLOYMENT AND PAY ROLLS  
ALL MANUFACTURING INDUSTRIES

1923-25=100



ADJUSTED TO 1939 CENSUS OF MANUFACTURES

UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS



total number of full- and part-time employees reported. As not all reporting establishments supply information on man-hours, average hours worked per week and average hourly earnings are necessarily based on data furnished by a slightly smaller number of reporting firms. Because of variation in the size and composition of the reporting sample, the average hours per week, average hourly earnings, and average weekly earnings shown may not be strictly comparable from month to month. The sample, however, is believed to be sufficiently adequate in virtually all instances to indicate the general movement of earnings and hours over the period shown.

#### EMPLOYMENT AND PAY-ROLL INDEXES, AVERAGE HOURS AND EARNINGS

Employment and pay-roll indexes, as well as average hours worked per week, average hourly earnings, and average weekly earnings for May, June, and July 1942, where available, are presented in table 2. The May and June figures, where given, may differ in some instances from those previously published because of revisions necessitated primarily by the inclusion of late reports. Indexes of employment and pay rolls are given in table 3 for 55 additional manufacturing industries for the months of May, June, and July 1942. These indexes are based on 1939 as 100 and are available in mimeographed form for the period from January 1939 to January 1941, inclusive.

In table 4 indexes of employment and pay rolls are given for all manufacturing industries combined, for the durable- and nondurable-goods groups of manufacturing industries, and for each of 13 nonmanufacturing industries, by months, from July 1941 to July 1942, inclusive. The chart on page 869 indicates the trend of factory employment and pay rolls from January 1919 to July 1942.

TABLE 2.—Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries  
MANUFACTURING

[Indexes are based on 3-year average, 1923-25=100. For "all manufacturing," "durable goods," "nondurable goods," and "aluminum manufactures," they have been adjusted to preliminary 1939 Census figures. The indexes for all other manufacturing groups and industries have been adjusted to 1937 Census figures, except as otherwise noted, and are not comparable to indexes published in the Monthly Labor Review prior to November 1939. Comparable series available upon request.]

Industry	Employment index			Pay-roll index			Average weekly earnings <sup>1</sup>			Average hours worked per week <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942
<b>All manufacturing<sup>2</sup></b>	142.2	139.3	137.8	204.3	196.1	193.5	\$38.52	\$38.00	\$37.46	42.4	42.6	42.6	85.0	84.0	83.1
<b>Durable goods<sup>2</sup></b>	160.9	157.4	154.0	252.3	244.1	235.6	44.61	44.03	43.41	44.7	45.1	45.0	94.6	93.3	92.3
<b>Nondurable goods<sup>2</sup></b>	124.4	122.1	122.4	150.5	146.6	146.4	28.61	28.33	28.26	39.6	39.6	39.7	73.2	72.7	72.2
<b>Durable goods</b>															
<b>Iron and steel and their products, not including machinery</b>	135.0	135.5	135.0	188.1	184.4	184.1	40.40	39.82	39.68	42.0	42.6	42.6	94.3	93.7	93.3
Blast furnaces, steel works, and rolling mills	151.6	152.2	151.5	201.3	198.1	196.6	41.64	40.85	40.91	39.9	40.8	40.9	100.4	99.9	100.0
Bolts, nuts, washers, and rivets	175.0	176.2	173.7	291.0	291.4	292.2	39.79	39.50	40.31	44.7	45.1	45.7	88.6	88.0	88.2
Cast-iron pipe	93.7	96.0	97.5	132.0	135.7	133.3	33.80	33.94	32.77	44.0	44.0	43.1	77.3	76.9	75.7
Cutlery (not including silver and plated cutlery) and edge tools	124.9	128.2	128.4	177.2	182.0	183.1	37.02	37.00	37.18	45.6	46.0	46.3	82.2	81.1	81.0
Forgings, iron and steel <sup>3</sup>	133.5	131.6	129.6	241.1	241.8	236.8	49.70	50.62	50.14	48.1	48.4	48.7	103.4	104.3	103.1
Hardware	95.4	93.4	90.8	150.7	145.3	138.9	38.40	37.77	37.22	44.7	45.9	46.1	84.8	82.4	80.9
Plumbers' supplies <sup>4</sup>	65.6	73.7	77.7	80.4	91.4	90.8	35.17	35.48	33.45	41.6	41.7	39.9	83.7	84.6	83.8
Stamped and enameled ware	199.5	203.8	204.1	308.1	316.6	310.3	36.22	36.32	35.66	43.6	44.3	44.1	83.2	82.5	81.2
Steam and hot-water heating apparatus and steam fittings <sup>5</sup>	120.1	119.7	120.3	172.8	172.3	173.8	42.65	42.67	42.85	45.6	46.2	46.7	92.2	92.3	91.5
Stoves	89.0	87.0	88.9	112.9	107.2	104.7	35.79	34.97	33.41	43.1	42.5	41.2	84.1	82.7	81.5
Structural and ornamental metalwork <sup>6</sup>	121.4	118.2	115.6	159.0	155.0	149.2	41.66	41.63	41.14	45.8	46.0	45.7	91.0	90.5	90.0
Tin cans and other tinware	107.4	107.8	108.0	146.7	143.6	141.4	30.43	29.77	29.26	40.6	40.4	40.1	74.9	74.2	73.6
Tools (not including edge tools, machine tools, files, and saws)	151.6	155.2	154.1	233.7	244.7	241.3	38.52	39.27	38.91	46.3	47.7	47.6	83.0	82.3	81.8
Wirework	156.1	154.5	151.9	251.1	249.3	241.2	38.58	38.59	38.32	44.9	45.1	45.3	86.5	86.4	84.9

See footnotes at end of table.

TABLE 2.—Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries—Continued  
MANUFACTURING—Continued

Industry	Employment index			Pay-roll index			Average weekly earnings <sup>1</sup>			Average hours worked per week <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942
<i>Durable goods—Continued</i>															
<b>Machinery, not including transportation equipment</b>															
Agricultural implements (including tractors)	210.3	206.5	203.1	347.8	342.9	332.6	246.03	246.03	245.41	47.5	48.1	47.8	95.9	95.2	94.2
Cash registers, adding machines, and calculating machines <sup>1</sup>	165.4	167.2	166.9	255.4	262.7	259.1	42.36	43.07	42.55	42.5	43.1	43.2	100.0	100.2	98.6
Electrical machinery, apparatus, and supplies	185.2	185.9	179.1	294.7	293.6	292.6	49.79	49.40	51.10	46.8	47.3	48.6	107.5	105.4	106.2
Engines, turbines, water wheels and windmills	(6)	(6)	(6)	(6)	(6)	(6)	42.57	42.62	42.21	46.1	46.4	46.0	93.2	92.6	91.8
Foundry and machine-shop products	167.4	165.1	162.8	250.3	249.8	241.9	56.74	55.92	56.16	48.4	48.8	48.9	116.9	114.7	114.9
Machine tools	(6)	(6)	(6)	(6)	(6)	(6)	44.46	44.71	43.91	47.8	48.4	48.2	92.4	92.1	91.0
Radios and phonographs	197.4	191.4	196.4	293.1	284.4	283.3	51.58	52.47	52.24	52.8	53.8	54.1	97.3	97.4	96.5
Textile machinery and parts	107.5	108.5	109.0	158.2	159.5	159.3	36.77	36.50	35.33	45.5	45.7	45.0	80.3	79.9	78.5
Typewriters and parts <sup>1</sup>	98.7	103.4	116.0	148.9	160.6	162.7	37.01	38.07	34.39	44.4	45.2	42.2	82.7	82.8	81.6
<b>Transportation equipment<sup>1</sup></b>	293.2	273.4	256.7	477.4	438.3	411.3	50.94	50.16	50.06	46.5	46.7	46.9	109.1	107.1	106.9
Aircraft <sup>1</sup>	(6)	(6)	(6)	(6)	(6)	(6)	46.27	46.92	46.45	46.7	47.2	47.6	99.7	99.8	98.9
Automobiles <sup>1</sup>	95.6	91.2	87.6	147.9	142.2	136.2	49.79	50.20	50.08	43.3	44.0	43.7	114.4	113.7	114.2
Cars, electric, and steam-railroad <sup>1</sup>	(6)	(6)	(6)	(6)	(6)	(6)	44.12	43.90	43.44	43.0	43.5	43.4	102.6	100.9	100.2
Locomotives <sup>1</sup>	(6)	(6)	(6)	(6)	(6)	(6)	50.66	48.29	50.47	46.8	46.1	47.2	108.3	104.8	106.8
Shipbuilding <sup>1</sup>	(6)	(6)	(6)	(6)	(6)	(6)	55.19	52.74	53.27	48.5	48.4	48.6	113.3	108.9	109.1
<b>Nonferrous metals and their products<sup>1</sup></b>	146.6	146.1	145.9	223.5	218.3	213.6	42.01	41.23	40.39	44.5	44.6	44.9	93.5	92.0	90.8
Aluminum manufactures <sup>10 11</sup>	(6)	(6)	(6)	(6)	(6)	(6)	41.29	40.54	41.15	44.8	44.5	45.2	92.1	91.3	91.3
Brass, bronze, and copper products	109.0	112.2	114.3	179.7	177.6	175.9	46.70	45.81	44.73	45.6	45.9	45.2	102.6	101.0	99.3
Clocks and watches and time-recording devices	89.4	90.3	95.8	98.5	102.9	108.1	36.56	35.08	34.05	44.9	45.3	44.3	78.3	77.6	76.8
Jewelry	88.0	84.7	86.8	110.7	103.1	101.7	29.50	30.52	30.08	42.1	43.5	43.2	71.1	71.2	70.0
Lighting equipment <sup>1</sup>	63.7	65.2	65.8	81.2	82.2	81.1	37.16	36.72	35.93	44.5	44.6	44.7	83.9	83.5	81.3
Silverware and plated ware	100.1	100.0	100.8	137.1	134.4	130.2	38.41	37.72	36.39	40.9	41.2	40.6	92.2	90.9	89.4
Smelting and refining—copper, lead and zinc	73.3	73.3	73.3	93.3	93.7	90.3	27.31	27.35	26.66	41.2	41.4	41.2	66.0	65.9	64.4
<b>Lumber and allied products</b>	93.0	94.6	96.1	109.6	112.2	114.8	27.86	27.89	28.05	41.6	41.8	41.7	67.0	67.0	67.7
Furniture	71.7	70.3	70.2	77.0	74.5	71.0	30.06	29.93	28.70	43.4	43.2	42.4	69.8	69.3	67.6
Lumber	65.6	65.3	64.9	84.2	84.5	78.6	26.11	26.26	25.05	40.4	40.7	40.4	64.6	64.6	62.0
Millwork															
Sawmills															
<b>Stone, clay, and glass products</b>	91.8	94.0	94.3	100.2	104.6	105.6	29.68	30.29	30.59	37.7	38.6	39.0	78.4	78.0	77.1
Brick, tile, and terra cotta	68.9	69.9	70.6	71.9	73.0	72.4	27.56	27.56	27.56	38.4	39.2	38.9	71.3	70.8	70.0
Concrete	84.6	83.8	82.3	101.2	110.7	95.1	33.79	33.94	32.67	40.3	40.8	40.5	83.7	82.5	80.6
Glass	115.0	121.2	123.6	143.3	156.1	166.6	30.47	31.49	32.99	36.3	37.7	38.9	84.0	83.4	83.5
<b>Marble, granite, slate, and other products</b>	37.6	38.2	33.5	32.7	32.7	37.8	30.97	30.41	29.26	39.8	39.2	40.2	77.6	77.6	72.1
Pottery <sup>1</sup>	116.5	117.2	118.9	126.6	132.7	136.2	27.84	28.81	28.90	36.7	37.9	38.4	76.0	75.9	75.0



Stone, clay, and glass products		91.8	94.0	94.8	100.2	104.6	105.6	29.88	30.59	37.7	38.6	39.0	78.4	78.0	77.1
Brick, tile, and terra cotta		68.9	69.9	70.6	71.9	73.0	72.4	27.55	27.56	38.4	38.9	38.9	71.3	70.8	70.8
Cement		84.6	83.1	82.3	80.2	80.7	80.1	33.79	33.94	40.3	40.8	40.5	83.7	82.5	83.5
Glass		115.0	121.2	123.6	143.3	156.1	166.6	30.47	31.49	36.3	37.7	38.9	84.0	83.4	83.6
Non-durable goods															
Marble, granite, slate, and other products		37.6	38.2	33.5	32.7	32.7	27.8	29.29	30.41	39.8	39.2	40.2	77.6	75.9	72.1
Pottery		115.5	117.2	118.9	126.6	132.7	135.2	27.84	28.81	36.7	37.9	38.4	76.0	75.9	75.9
Textiles and their products															
Fabrics		108.2	108.8	111.8	124.3	123.2	128.3	23.73	23.48	38.2	38.6	39.0	81.3	80.3	80.4
Carpets and rugs		104.2	104.5	104.7	129.9	129.0	128.7	24.00	23.80	39.8	40.2	40.5	80.6	79.8	79.8
Cotton goods		70.8	69.9	67.4	81.9	81.2	76.9	31.88	32.25	40.5	40.4	40.5	79.3	78.3	78.3
Cotton small wares		114.5	114.5	114.4	150.8	153.2	153.3	28.68	28.49	43.7	43.7	43.7	83.1	82.8	82.8
Dyeing and finishing textiles		112.9	111.5	110.0	167.0	162.5	158.3	28.68	28.49	43.7	43.7	43.7	83.1	82.8	82.8
Hats, fur-felt		128.0	128.2	132.8	145.0	142.9	147.7	27.42	27.21	41.6	41.3	41.4	86.4	85.8	85.5
Hosiery		62.6	65.3	58.3	63.2	66.6	59.0	27.95	28.21	32.8	33.3	32.7	85.7	83.8	84.2
Knitted underwear		118.3	119.9	122.1	145.5	148.2	149.2	21.61	21.75	35.6	36.0	36.3	61.0	60.2	59.3
Knitted outerwear		77.3	78.5	81.0	81.1	82.0	86.1	21.57	21.61	35.6	36.0	36.3	61.0	60.2	59.3
Knitted underwear		87.9	88.7	88.6	110.1	111.3	110.3	21.11	21.06	39.5	39.7	39.4	61.8	60.9	60.9
Silk and rayon goods		151.0	152.4	155.0	166.4	166.4	170.7	25.44	25.10	40.7	40.6	40.4	57.7	57.2	57.5
Woolen and worsted goods		63.4	63.8	63.5	69.9	71.0	70.8	22.98	23.24	39.8	40.6	40.4	77.0	72.9	71.5
Wearing apparel		105.6	105.8	105.5	144.2	134.2	132.0	31.63	29.44	40.8	40.5	40.6	62.8	61.6	62.7
Clothing, men's		112.4	113.8	122.8	105.6	104.2	119.6	22.89	22.51	35.2	35.1	36.4	68.5	68.3	68.7
Clothing, women's		141.3	140.0	160.9	120.3	109.7	121.8	23.97	24.13	34.7	34.5	34.7	61.7	58.1	60.8
Corsets and allied garments		96.9	109.1	112.6	124.3	143.3	140.7	23.28	21.42	36.7	37.6	38.3	58.0	57.8	57.9
Men's furnishings		110.8	110.6	112.3	138.6	139.9	140.1	18.67	19.00	35.3	36.0	36.3	52.6	51.8	51.8
Millinery		52.8	51.1	55.6	40.6	37.0	44.7	23.56	22.13	28.3	27.8	27.5	73.6	71.5	71.5
Shirts and collars		128.2	128.1	131.1	150.2	151.2	158.2	18.59	18.78	36.2	36.4	37.1	51.6	51.8	51.8
Leather and its manufactures															
Boots and shoes		96.2	97.1	98.7	110.2	109.7	112.6	26.46	26.09	38.1	38.1	38.6	68.7	68.5	68.2
Leather		93.5	94.1	95.7	103.4	103.3	106.7	24.71	24.84	37.5	37.4	38.0	65.4	65.2	65.0
Food and kindred products		156.6	141.9	135.7	186.5	170.1	160.3	30.32	30.29	41.9	41.5	40.9	73.5	74.3	74.1
Baking		160.1	154.2	150.9	182.0	174.9	166.3	31.50	31.31	42.6	42.9	42.4	73.7	72.9	71.7
Beverages		325.8	312.8	316.7	467.7	423.8	444.5	42.15	39.72	43.0	41.1	42.7	98.9	97.3	97.0
Butter		124.3	124.6	118.4	131.3	128.8	119.1	27.41	26.86	47.6	47.4	46.3	57.5	56.2	55.6
Canning and preserving		215.5	134.6	106.6	273.6	157.5	120.9	24.14	22.19	40.9	37.6	35.5	59.7	59.9	61.7
Confectionery		84.9	79.4	82.8	102.5	98.6	97.3	22.99	23.78	38.4	39.5	38.3	60.6	60.8	59.2
Flour		80.7	79.3	77.1	98.0	92.3	87.6	32.46	31.35	44.3	44.3	43.7	70.9	69.4	68.7
Ice cream		95.8	93.8	86.9	95.3	91.4	82.2	33.74	33.04	47.2	46.7	46.0	80.1	80.6	80.0
Slaughtering and meat packing		150.7	145.6	138.4	188.1	184.2	169.7	32.61	32.86	40.7	40.9	39.9	89.6	91.0	89.1
Sugar, beet		61.7	51.9	50.0	79.0	71.3	67.0	33.57	36.10	37.5	39.7	39.4	89.6	91.0	89.1
Sugar refining, cane		85.2	87.0	93.0	86.6	88.9	89.5	28.73	28.95	38.7	37.9	37.4	74.3	76.4	72.9
Tobacco manufactures															
Chewing and smoking tobacco and snuff		64.5	63.8	62.7	76.5	77.5	73.3	22.11	22.18	38.5	38.5	37.7	57.5	57.5	56.5
Cigars and cigarettes		51.5	51.4	51.3	75.9	75.8	71.3	23.82	23.86	37.0	37.2	36.7	63.6	63.2	61.2
Paper and printing		115.6	117.2	119.1	128.4	130.5	131.9	33.77	33.75	39.8	39.5	39.6	89.3	88.6	87.6
Boxes, paper		119.2	123.1	126.8	158.9	164.2	169.1	26.44	26.44	39.2	39.6	40.1	67.6	66.8	66.1
Printing and publishing		121.5	126.0	128.4	162.3	168.6	170.8	33.09	33.14	40.9	41.5	42.4	80.9	79.7	77.7
Book and job		99.1	96.7	97.9	95.9	93.3	94.5	33.89	33.56	39.1	38.9	39.1	86.6	86.9	86.6
Newspapers and periodicals		110.4	112.3	113.2	111.6	114.3	114.2	40.80	41.14	35.8	36.0	36.0	112.8	112.5	111.6

See footnotes at end of table.

TABLE 2.—Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries—Continued  
MANUFACTURING—Continued

Industry	Employment index			Pay-roll index			Average weekly earnings <sup>1</sup>			Average hours worked per week <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942
<i>Nondurable goods—Continued</i>															
<b>Chemicals, petroleum, and coal products</b>															
Petroleum refining	156.7	156.8	157.2	230.8	227.4	225.8	\$38.80	\$38.00	\$37.93	41.0	41.0	41.0	94.3	93.0	91.7
Other than petroleum refining	133.9	133.6	131.9	186.5	182.0	179.3	43.10	42.18	42.07	39.0	38.4	38.5	110.9	110.2	108.8
Chemicals <sup>1</sup>	162.2	162.4	163.3	244.4	241.4	240.1	37.50	36.71	36.66	41.6	41.7	41.8	89.4	88.1	86.7
Cottonseed—oil, cake, and meal	195.2	196.3	193.9	313.4	307.7	302.9	42.19	41.21	41.06	41.9	41.5	41.5	100.5	99.0	99.0
Druggists' preparations	60.5	66.7	67.5	65.5	61.4	69.7	17.40	16.58	16.58	43.4	43.6	43.0	39.9	39.7	38.3
Explosives	161.5	158.2	156.7	207.7	203.0	205.6	28.83	28.78	29.42	40.0	40.0	40.4	73.2	72.0	73.2
Fertilizers	(9)	(9)	(9)	(9)	(9)	(9)	45.73	45.72	45.57	46.0	46.0	46.0	99.7	99.4	99.0
Paints and varnishes	93.8	102.0	125.8	118.4	121.8	148.4	22.72	21.17	20.95	38.4	38.6	39.6	59.1	54.9	52.9
Rayon and allied products	126.2	131.8	136.2	161.6	169.7	176.3	35.43	35.78	35.96	41.1	41.5	42.0	86.5	86.2	85.6
Soap	309.1	314.5	312.1	392.6	397.8	392.9	32.20	32.29	32.13	39.1	39.8	39.8	82.8	81.2	80.8
	83.4	84.8	86.7	121.7	128.9	130.4	34.45	35.88	35.51	39.3	40.8	41.0	87.6	87.9	86.7
<b>Rubber products</b>															
Rubber boots and shoes	101.3	97.2	94.6	145.6	137.5	132.4	39.17	38.34	37.80	41.4	41.5	41.4	93.3	92.6	91.6
Rubber tires and inner tubes	74.4	70.6	73.3	99.6	98.7	101.9	30.35	31.72	31.53	40.2	41.9	41.9	75.5	75.2	75.2
Rubber goods other	82.6	77.9	74.5	130.4	118.7	112.5	46.24	44.42	44.05	41.5	40.4	40.4	110.9	110.3	109.6
	163.5	160.5	156.0	221.3	218.0	210.0	33.38	33.33	32.93	41.8	42.5	42.3	79.4	78.8	78.0

## NONMANUFACTURING

[Indexes are based on 12-month average, 1929=100]

<b>Coal mining:</b>															
Anthracite <sup>13 15</sup>	46.9	45.5	48.2	45.9	56.0	51.5	\$32.06	\$40.25	\$35.05	32.4	35.4	35.2	98.2	99.1	106.0
Bituminous <sup>12</sup>	93.0	92.7	92.9	112.7	140.3	122.1	32.18	39.91	34.55	29.7	33.2	32.7	108.6	106.0	87.6
<b>Metallic mining<sup>14</sup></b>	81.5	81.8	82.2	101.6	102.0	100.8	38.90	39.12	38.34	42.5	44.0	43.8	90.4	88.7	87.6
Quarrying and nonmetallic mining	51.6	51.9	51.7	63.9	65.1	63.0	31.53	30.79	30.79	43.7	44.6	43.7	70.6	69.7	69.4
<b>Crude-petroleum production<sup>15</sup></b>	57.2	57.6	58.1	62.4	63.1	62.0	39.88	40.00	39.01	39.4	39.1	38.4	98.6	98.8	99.4
<b>Public utilities:</b>															
Telephone and telegraph <sup>16 17</sup>	93.5	92.5	91.7	126.0	125.3	125.0	32.96	33.03	33.34	40.4	40.3	40.5	81.5	82.4	82.8
Electric light and power <sup>18 17</sup>	56.7	57.5	58.0	113.0	113.2	113.6	39.67	39.30	39.13	40.3	40.5	40.2	97.5	97.2	97.2
Street railways and busses <sup>16 17 18</sup>	74.8	73.0	72.9	91.0	89.4	86.8	39.69	39.41	38.77	47.8	48.0	47.8	81.6	80.9	80.0
<b>Trade:</b>															
Wholesale <sup>16 19</sup>	89.7	90.4	91.2	91.3	91.0	91.4	35.35	35.16	35.20	41.4	41.4	41.4	85.9	85.0	85.2
Retail <sup>16 17</sup>	90.3	92.8	94.0	91.8	93.4	94.0	23.57	23.38	23.08	42.1	41.7	41.6	61.0	60.7	60.8
Food <sup>17</sup>	114.4	114.5	114.8	118.9	117.9	116.2	26.70	26.65	26.13	42.3	41.8	41.3	61.2	61.3	60.4

General merchandising<sup>16 17</sup>

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Wholesale 15 19

Retail 16 17

Food 17

Food 17

General merchandising 15 17	103.6	108.4	109.5	105.1	109.0	108.5	19.89	19.73	19.45	38.6	38.1	37.6	51.4	51.5
Apparel 17	81.9	90.9	93.2	85.4	92.2	92.2	24.33	23.45	22.91	38.5	37.7	37.4	63.5	62.8
Furniture and housefurnishings 17	61.8	63.5	66.5	63.4	65.3	69.5	31.46	31.69	32.15	44.0	44.1	44.3	74.7	75.4
Automotive 17	53.4	54.3	57.9	57.9	58.6	60.6	32.10	31.98	31.48	47.8	48.0	47.9	67.4	66.3
Lumber and building materials 17	70.8	71.2	72.9	80.8	80.1	81.4	31.55	31.06	30.95	42.8	42.9	43.0	76.1	74.4
Hôtels (year-round) 15 16 19	94.4	95.5	96.1	94.3	96.5	95.4	17.58	17.43	17.14	45.4	45.4	45.0	38.3	38.2
Hotels 19	119.1	114.8	113.7	117.8	115.9	113.8	20.68	20.86	20.96	43.4	43.7	43.6	48.6	48.6
Laundries and cleaning 15	126.9	130.1	127.6	109.2	117.7	113.1	24.04	25.33	24.85	43.4	43.4	44.5	57.4	57.0
Brokers 15 16 17	-5.3	-1.6	-3.8	-3.8	-3.0	-3.8	41.22	40.16	40.84	(23)	(23)	(23)	(23)	(23)
Insurance 16 17	+5.6	-1.1	-7.7	+9.9	-1.7	-4.4	38.07	37.97	37.89	(23)	(23)	(23)	(23)	(23)
Building construction 15	-4.2	-4.4	-2.3	-3.2	-1.7	+5.0	43.42	42.38	41.75	(23)	(23)	(23)	(23)	(23)
Water transportation 15	70.4	74.3	74.1	-4.8	+4.3	+9.2	(23)	(23)	(23)	(23)	(23)	(23)	(23)	(23)
Class I steam railroads 15	129.0	126.7	124.5	(23)	(23)	(23)	(23)	(23)	(23)	(23)	(23)	(23)	(23)	(23)

<sup>1</sup> A bulletin giving averages by years, 1932 to 1940, inclusive, and by months, January 1932 to November 1941, inclusive, available on request. Average hours and average hourly earnings are computed from data supplied by a smaller number of establishments than average weekly earnings, as not all reporting firms furnish man-hours. The figures are not strictly comparable from month to month because of changes in the size and composition of the reporting sample.

<sup>2</sup> See tables 9, 10, and 11 in the December 1940 issue of "Employment and Pay Rolls" for comparable series back to January 1919 for all manufacturing and back to January 1923 for the durable- and nondurable-goods groups.

<sup>3</sup> Revisions in the following industries and groups have been made as indicated:

*Forgings, iron and steel.*—April 1942 employment and pay-roll indexes to 128.2 and 232.2. *Hardware.*—January to April 1942 employment indexes to 98.7, 94.1, 94.7, 92.2; February to April 1942 pay-roll indexes to 130.6, 135.4, 135.9; January to April 1942 average weekly earnings to \$32.94, \$33.67, \$34.66, \$35.84; February to April average hours to 45.2, 45.4, 45.4; December 1941 to April 1942 average hourly earnings to 74.1, 75.0, 74.6, 76.4, and 76.6 cents.

*Typewriters and parts.*—April 1942 employment and pay-roll indexes to 126.3 and 172.1; average weekly earnings, hours, and hourly earnings to \$33.41, 42.9 hours, and 77.9 cents.

*Transportation equipment.*—February to April 1942 employment indexes to 217.5, 227.4, 240.9; January to April 1942 pay-roll indexes to 332.0, 340.4, 355.6, and 384.5.

*Aircraft.*—March and April 1942 average hourly earnings to 95.9 and 97.6 cents.

*Cars, electric, and steam-railroad.*—March and April 1942 average hourly earnings to 96.6 and 97.8 cents.

*Shipbuilding.*—March and April 1942 average weekly earnings to \$52.28, \$53.28; April average hours and average hourly earnings to 49.0 hours and 108.3 cents.

*Nonferrous metals and their products.*—January to April 1942 employment indexes to 144.9, 146.3, 147.7, 145.7; pay-roll indexes to 198.9, 202.6, 208.4, and 210.1; April 1942 average hourly earnings to 89.6 cents.

*Pottery.*—April 1942 employment and pay-roll indexes to 119.8 and 134.7; average weekly earnings, hours, and hourly earnings to \$28.50, 38.4 hours, and 73.8 cents.

*Butter.*—April 1942 employment and pay-roll indexes to 111.3 and 109.3; average weekly earnings, hours, and hourly earnings to \$25.54, 45.3 hours, and 55.3 cents.

*Chemicals.*—March and April 1942 employment indexes to 192.6, 193.5; pay-roll indexes to 288.3, 293.7; average weekly earnings to \$39.52, \$39.97; average hourly earnings to 96.3, 97.4 cents.

<sup>4</sup> See table 7 in the April 1941 issue of "Employment and Pay Rolls" for revised figures from January 1940 to March 1941.

<sup>5</sup> Because of changes in the composition of the reporting sample, hours and earnings are not comparable with those previously published as indicated:

*Forging, iron and steel.*—Average weekly earnings, weekly hours, and hourly earnings. (Comparable April figures, \$49.50, 48.5 hours, and 102.5 cents. Comparable March figures, \$48.46, 48.3 hours, and 100.5 cents.)

*Plumbers' supplies.*—Average hourly earnings (comparable April 1942 figure 82.9 cents.) *Steam and hot-water heating apparatus and steam fittings.*—Average hourly earnings (comparable April 1942 figure 91.5 cents.)

*Structural and ornamental metalwork.*—Average hourly earnings (comparable April 1942 figure 89.1 cents.)

*Cash registers, adding machines, and calculating machines.*—Average hourly earnings (comparable April 1942 figure 100.0 cents.)

*Shipbuilding.*—Average hourly earnings (comparable April 1942 figure 108.0 cents.)

*Lighting equipment.*—Average hourly earnings (no comparable April figure).

<sup>6</sup> Included in total and group indexes, but not available for publication separately.

<sup>7</sup> Adjusted on basis of a complete employment survey of the aircraft industry made by the Bureau of Labor Statistics for August 1940. Not comparable with previously published indexes from January 1939 to August 1940, inclusive. Comparable figures for this period given in table 9 of the September 1940 issue of "Employment and Pay Rolls."

<sup>8</sup> The indexes for "Automobiles" have been adjusted to 1933 Census figures, but not to later Census figures because of problems involving integrated industries.

<sup>9</sup> See footnote 7 in table 5 of October 1941 "Employment and Pay Rolls" for revised employment and pay-roll indexes, average hours worked per week, average hourly earnings, and average weekly earnings in locomotives, August 1940 to July 1941, inclusive.

<sup>10</sup> See table 8 in March 1941 "Employment and Pay Rolls" pamphlet for revised figures from January 1935 to December 1940.



<sup>11</sup> Revised hours and earnings in manufacture of aluminum:

	Average weekly earnings	Average hours worked per week	Average hourly earnings (cents)
1941: January	\$32.30	41.8	77.3
February	32.35	42.0	77.0
March	30.96	40.0	77.4
April	31.64	41.1	76.9
May	35.28	42.1	83.9
June	33.50	39.7	84.3
July	35.91	41.7	86.1
August	36.03	42.2	85.4
September	36.31	42.4	85.7
October	36.49	42.6	85.6
November	37.13	42.8	86.7
December	39.00	44.8	88.4
1942: January	40.02	45.2	88.6
February	39.11	44.4	88.4
March	40.10	44.8	89.7
April	40.99	44.9	91.4

<sup>12</sup> Indexes adjusted to 1935 Census. Comparable series back to January 1929 presented in January 1938 issue of pamphlet.

<sup>13</sup> See table 7 of October 1940 "Employment and Pay Rolls" for revised employment and pay-roll indexes, average hours worked per week, average hourly earnings, and average weekly earnings in anthracite mining, February 1940 to September 1940, inclusive.

<sup>14</sup> See table 7 of February 1941 pamphlet for revised figures for metalliferous mining from January 1933 to January 1941, inclusive.

<sup>15</sup> Does not include well-drilling or rig-building.

<sup>16</sup> Average weekly earnings, hourly earnings, and hours are not comparable with figures published in pamphlets prior to January 1938 as they now exclude corporation officers, executives, and other employees whose duties are mainly supervisory.

<sup>17</sup> Retail-trade indexes adjusted to 1935 Census and public-utility indexes to 1937 Census. Not comparable to indexes published in pamphlets prior to January 1940 or in Monthly Labor Review prior to April 1940, with but one exception, retail furniture, which has been revised since publication of July 1940 pamphlet, back to January 1936. Comparable series for earlier months available upon request.

<sup>18</sup> Covers street-railways and trolley and motorbus operations of subsidiary, affiliated, and successor companies; formerly "electric-railroad and motorbus operation and maintenance."

<sup>19</sup> Indexes adjusted to 1933 Census. Comparable series in November 1934 and subsequent issues of "Employment and Pay Rolls."

<sup>20</sup> Cash payments only; additional value of board, room and tips cannot be computed. <sup>21</sup> Indexes of employment and pay rolls are not available; percentage changes from preceding month substituted.

<sup>22</sup> See note 18 in table 9 in the July 1941 issue of "Employment and Pay Rolls" for revised average weekly earnings in the brokerage industry from January 1939 to January 1941.

<sup>23</sup> Not available.

<sup>24</sup> Based on estimates prepared by the United States Maritime Commission covering employment on steam and motor merchant vessels of 1,000 gross tons or over in deep-sea trades only. Pay-roll indexes not available. Percentage changes from preceding month substituted.

<sup>25</sup> Preliminary; source—Interstate Commerce Commission.

TABLE 3.—Indexes of Employment and Pay Rolls in 55 Additional Manufacturing Industries

[12-month average 1939=100]

Industry	Employment			Pay rolls		
	July 1942	June 1942	May 1942	July 1942	June 1942	May 1942
Iron and steel group:						
Metal doors and shutters	139.2	141.6	140.8	210.9	206.8	197.1
Firearms	(1)	(1)	(1)	(1)	(1)	(1)
Screw-machine products	270.3	268.0	259.2	457.4	448.2	426.0
Wire drawing	142.4	141.8	139.8	197.5	196.4	190.8
Wrought pipe not made in rolling mills	192.7	185.4	177.9	321.3	298.0	274.7
Steel barrels, kegs, and drums	122.6	122.5	129.8	165.4	185.7	196.7
Machinery group:						
Machine-tool accessories	(1) <sup>1</sup>	(1)	(1)	(1) <sup>1</sup>	(1)	(1)
Pumps	274.7	273.9	263.2	521.5	526.4	497.1
Refrigerators and refrigerating apparatus	100.4	94.2	196.1	151.1	140.5	136.0
Sewing machines	125.6	128.6	135.2	223.0	222.8	229.4
Washing machines, wringers, and driers	108.2	96.9	105.1	186.6	152.7	158.1
Transportation equipment group:						
Motorcycles, bicycles, and parts	140.5	139.1	131.9	224.4	219.2	202.3
Nonferrous-metals group:						
Sheet-metal work	149.3	147.7	149.1	213.8	219.2	216.5
Smelting and refining of scrap metal	169.8	169.4	164.4	246.5	243.5	232.8
Lumber group:						
Caskets and morticians' goods	92.0	96.8	96.8	115.6	126.9	123.1
Wood preserving	117.4	117.3	117.5	181.3	176.8	174.8
Wood turned and shaped	111.4	114.0	112.9	153.4	159.4	153.5
Wooden boxes, other than cigar	127.4	127.1	125.4	187.8	189.0	185.7
Mattresses and bedsprings	98.8	106.4	113.9	124.5	133.8	142.0
Stone, clay, and glass products group:						
Abrasive wheels	212.5	207.8	204.5	314.1	306.3	313.1
Asbestos products	131.1	134.4	134.5	207.3	208.0	206.7
Lime	112.9	117.7	118.3	157.1	165.4	170.0
Gypsum	100.3	108.1	109.0	138.5	142.9	144.3
Glass products made from purchased glass	117.0	116.6	120.5	142.7	144.1	148.6
Wallboard and plaster, except gypsum	136.1	129.7	128.4	182.1	174.6	167.3
Textiles:						
Textile bags	124.0	121.6	118.2	154.9	150.4	144.0
Cordage and twine	137.0	139.7	141.0	202.9	211.7	210.7
Curtains, draperies, and bedspreads	93.8	94.6	99.6	127.1	129.0	136.2
Housefurnishings, other	144.9	135.0	126.9	195.1	180.5	163.2
Jute goods, except felt	108.6	109.9	109.4	160.7	162.3	161.8
Handkerchiefs	93.6	93.1	94.6	126.7	129.9	129.6
Leather group:						
Boot and shoe cut stock and findings	96.8	96.8	98.1	124.6	125.8	129.7
Leather gloves and mittens	148.9	150.1	146.7	191.3	198.3	194.7
Trunks and suitcases	180.2	178.9	177.4	210.2	204.2	210.9
Food group:						
Cereal preparations	117.3	111.5	111.3	155.6	146.9	144.6
Condensed and evaporated milk	150.5	154.0	146.0	199.1	201.1	188.2
Feeds, prepared	122.1	120.5	115.3	168.4	163.0	151.8
Paper and printing group:						
Paper bags	110.9	118.6	123.5	141.2	152.1	163.9
Envelopes	110.5	114.0	117.1	128.3	131.3	133.9
Paper goods, not elsewhere classified	117.8	120.9	123.5	139.5	142.6	147.5
Bookbinding	109.5	108.2	107.1	141.6	142.2	139.1
Lithographing	86.7	89.8	94.0	94.5	97.9	104.9
Chemical, petroleum and coal products:						
Ammunition	(1)	(1)	(1)	(1)	(1)	(1)
Compressed and liquefied gases	164.5	161.6	157.5	232.7	236.6	222.4
Perfumes and cosmetics	102.4	100.4	100.4	119.6	117.9	118.5
Coke-oven products	124.9	124.3	121.4	162.6	156.5	153.6
Paving materials	85.9	83.5	80.6	121.4	119.6	112.9
Roofing materials	131.5	127.0	126.6	185.7	182.2	175.4
Miscellaneous group:						
Chemical fire extinguishers	(1)	(1)	(1)	(1)	(1)	(1)
Buttons	114.6	118.4	123.0	169.6	174.7	178.2
Instruments, professional, scientific, and commercial	(1)	(1)	(1)	(1)	(1)	(1)
Optical goods	(1)	(1)	(1)	(1)	(1)	(1)
Photographic apparatus	137.8	135.2	132.6	189.5	192.1	186.1
Pianos, organs, and parts	91.9	90.5	96.6	131.1	120.9	126.2
Toys, games, and playground equipment	95.3	116.7	121.1	126.6	158.7	161.3

<sup>1</sup> Not available for publication separately.

TABLE 4.—Indexes of Employment and Pay Rolls in Selected Manufacturing<sup>1</sup> and Nonmanufacturing<sup>2</sup> Industries, July 1941 to July 1942

Industry	1941							1942						
	Av.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<b>Employment</b>														
<b>Manufacturing</b>														
All industries.....	127.7	130.6	133.1	135.2	135.4	134.8	134.2	132.5	133.8	135.1	136.6	137.8	139.3	142.2
Durable goods <sup>3</sup> .....	134.0	137.6	138.7	142.1	144.0	144.6	144.2	143.3	145.1	147.5	150.9	154.0	157.4	160.9
Nondurable goods <sup>4</sup> .....	121.6	123.9	127.7	128.7	127.3	125.4	124.8	122.1	123.0	123.2	123.0	122.4	122.1	124.4
<b>Nonmanufacturing</b>														
Anthracite mining <sup>5</sup> .....	49.7	49.3	50.0	50.0	50.3	50.2	49.1	49.0	48.8	48.4	47.8	48.2	45.5	46.9
Bituminous-coal mining <sup>5</sup> .....	86.2	90.3	92.6	94.2	95.3	95.1	95.5	95.1	94.5	93.7	93.5	92.9	92.7	93.0
Metalliferous mining <sup>5</sup> .....	77.6	79.0	79.9	79.4	79.7	79.5	80.2	80.7	81.0	81.9	81.9	82.2	81.8	81.5
Quarrying and nonmetallic mining.....	49.8	52.7	53.9	54.2	54.1	52.6	50.9	46.8	46.7	47.7	50.3	51.7	51.9	51.6
Crude-petroleum production.....	61.0	62.1	62.2	61.8	61.6	60.9	61.1	61.3	60.6	59.7	58.8	58.1	57.6	57.2
Telephone and telegraph <sup>7</sup> .....	86.3	88.3	89.6	90.3	90.6	90.1	90.0	90.4	90.3	90.5	91.2	91.7	92.5	93.5
Electric light and power <sup>7</sup> .....	92.7	94.6	95.2	94.9	94.1	93.4	93.1	92.0	90.5	89.6	88.9	88.0	87.5	86.7
Street railways and busses <sup>7</sup> .....	69.3	69.5	69.7	70.3	70.3	70.2	70.6	70.4	70.7	71.2	72.1	72.9	74.0	74.7
Wholesale trade.....	94.0	94.2	95.8	95.6	96.3	96.3	96.3	94.9	94.3	93.9	92.7	91.2	90.4	89.7
Retail trade <sup>7</sup> .....	98.0	96.7	96.9	100.0	101.0	103.0	113.0	95.4	94.0	94.4	94.3	94.0	92.8	90.3
Year-round hotels <sup>8</sup> .....	95.0	94.5	94.5	95.7	96.2	96.1	95.3	94.2	94.1	93.5	95.2	96.1	95.5	94.5
Laundries <sup>8</sup> .....	108.5	115.8	114.6	113.0	111.2	108.9	108.4	108.8	107.6	107.9	110.3	113.7	114.8	119.1
Dyeing and cleaning <sup>8</sup> .....	115.1	121.7	118.9	121.5	121.2	117.2	113.3	109.8	109.5	113.8	121.3	127.6	130.1	126.9
<b>Pay rolls</b>														
<b>Manufacturing</b>														
All industries.....	148.8	152.7	158.1	162.6	167.0	165.4	169.9	173.5	178.3	182.9	188.0	193.5	198.1	204.3
Durable goods <sup>3</sup> .....	167.8	172.2	177.6	183.3	191.4	190.3	195.4	204.3	210.6	217.3	226.6	235.6	244.1	252.3
Nondurable goods <sup>4</sup> .....	127.6	130.7	136.3	139.5	139.6	137.4	141.3	139.0	142.1	144.3	144.8	146.4	146.6	150.5
<b>Nonmanufacturing</b>														
Anthracite mining <sup>5</sup> .....	41.4	34.8	51.1	49.6	49.2	41.8	35.9	39.4	49.6	50.9	44.7	51.5	56.0	45.9
Bituminous-coal mining <sup>5</sup> .....	99.6	105.4	117.3	115.5	122.6	116.4	119.9	117.1	118.2	116.7	118.3	122.1	140.3	112.7
Metalliferous mining <sup>5</sup> .....	81.9	79.3	85.4	85.9	88.3	89.8	93.7	94.3	98.4	99.1	99.1	100.8	102.0	101.6
Quarrying and nonmetallic mining.....	51.8	55.5	59.3	60.5	61.5	57.5	55.8	48.9	52.0	54.4	58.1	63.0	65.1	65.9
Crude-petroleum production.....	60.5	61.4	61.5	64.4	64.4	64.2	64.6	64.8	64.8	62.6	63.2	62.0	63.1	62.6
Telephone and telegraph <sup>7</sup> .....	112.7	115.7	116.4	117.3	117.0	118.3	122.9	120.9	120.9	121.8	122.2	125.0	125.3	126.0
Electric light and power <sup>7</sup> .....	111.2	113.5	115.1	115.0	115.7	115.2	115.2	114.6	113.7	113.5	113.5	113.6	113.2	113.0
Street railways and busses <sup>7</sup> .....	75.4	75.8	78.6	78.1	78.4	78.5	80.0	80.5	83.7	84.7	84.4	86.8	89.4	90.9
Wholesale trade.....	87.1	88.0	89.8	90.9	92.0	91.6	92.8	91.8	93.7	93.9	92.2	91.7	91.0	91.3
Retail trade <sup>7</sup> .....	93.4	94.0	94.0	95.8	97.3	98.5	107.8	94.6	93.9	93.7	93.6	94.0	93.4	91.8
Year-round hotels <sup>8</sup> .....	88.5	87.6	88.2	90.0	91.9	93.2	93.3	91.5	92.6	91.6	93.5	95.4	96.6	96.3
Laundries <sup>8</sup> .....	99.3	106.7	104.7	105.2	103.4	101.9	102.6	103.8	102.5	104.3	108.6	113.8	115.2	117.8
Dyeing and cleaning <sup>8</sup> .....	90.4	96.4	92.1	99.5	98.5	93.0	88.6	86.5	85.6	92.7	105.7	113.1	117.7	109.2

<sup>1</sup> 3-year average 1923-25=100—adjusted to preliminary 1939 Census of Manufactures. See tables 9, 10, and 11 of December 1940 "Employment and Pay Rolls" for comparable figures back to January 1919 for "all manufacturing" and January 1923 for "durable goods" and "nondurable goods."

<sup>2</sup> 12-month average for 1929=100. Comparable indexes for wholesale trade, quarrying, metal mining, and crude-petroleum production are in November 1934 and subsequent issues of "Employment and Pay Rolls" or in February 1935 and subsequent issues of Monthly Labor Review. For other nonmanufacturing indexes see notes 5, 6, and 7.

<sup>3</sup> Includes: Iron and steel, machinery, transportation equipment, nonferrous metals, lumber and allied products, and stone, clay, and glass products.

<sup>4</sup> Includes: Textiles and their products, leather and its manufactures, food and kindred products, tobacco manufactures, paper and printing, chemicals and allied products, products of petroleum and coal, rubber products, and a number of miscellaneous industries not included in other groups.

<sup>5</sup> Indexes have been adjusted to the 1935 Census. Comparable series from January 1929 forward are presented in January 1938 and subsequent issues of the pamphlet. See also table 7 of October 1940 pamphlet for revised figures for anthracite mining, February to September 1940.

<sup>6</sup> See table 7 of February 1941 pamphlet for revised indexes January 1938 to January 1941.

<sup>7</sup> Retail-trade indexes adjusted to 1935 Census and public-utility indexes to 1937 Census. Not comparable with indexes published in "Employment and Pay Rolls" pamphlets prior to January 1940 or in Monthly Labor Review prior to April 1940. Comparable series, January 1929 to December 1939, available in mimeographed form.

<sup>8</sup> Covers street railways and trolley and motorbus operations of subsidiary, affiliated, and successor companies.

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# EMPLOYMENT AND UNEMPLOYMENT IN AUGUST 1942

UNEMPLOYMENT in the United States declined by 600,000 between July and August 1942, reaching a new low of 2,200,000, according to returns from the Bureau of the Census sample Monthly Report on the Labor Force.<sup>1</sup> Employment in August was sustained at the all-time high level of 54,000,000 reached in July, while the labor force showed a decrease equal to the drop in unemployment.

TABLE 1.—Estimated Civilian Labor Force, by Employment Status and by Sex, April 1940–August 1942

Month	Estimated number (millions of persons)								
	Labor force			Employed			Unemployed <sup>1</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>1940</b>									
April.....	53.9	40.6	13.3	45.1	34.1	11.0	8.8	6.5	2.3
May.....	54.7	41.3	13.4	46.3	35.3	11.0	8.4	6.0	2.4
June.....	56.2	42.3	13.9	47.6	36.4	11.2	8.6	5.9	2.7
July.....	56.9	43.1	13.8	47.6	36.8	10.8	9.3	6.3	3.0
August.....	56.6	42.9	13.7	47.7	36.9	10.8	8.9	6.0	2.9
September.....	54.9	41.5	13.4	47.9	36.7	11.2	7.0	4.8	2.2
October.....	54.4	41.3	13.1	47.0	36.2	10.8	7.4	5.1	2.3
November.....	53.7	41.1	12.6	46.3	35.8	10.5	7.4	5.3	2.1
December.....	53.4	40.9	12.5	46.3	35.7	10.6	7.1	5.2	1.9
<b>1941</b>									
January.....	53.0	40.7	12.3	45.3	35.1	10.2	7.7	5.6	2.1
February.....	52.9	40.6	12.3	45.7	35.4	10.3	7.2	5.2	2.0
March.....	52.7	40.4	12.3	45.8	35.4	10.4	6.9	5.0	1.9
April.....	53.5	40.9	12.6	46.8	36.2	10.6	6.7	4.7	2.0
May.....	54.2	40.9	13.3	48.5	37.0	11.5	5.7	3.9	1.8
June.....	56.2	42.3	13.9	50.2	38.3	11.9	6.0	4.0	2.0
July.....	56.6	42.6	14.0	50.9	38.9	12.0	5.7	3.7	2.0
August.....	56.4	42.4	14.0	51.0	38.8	12.2	5.4	3.6	1.8
September.....	54.8	41.0	13.8	50.3	38.0	12.3	4.5	3.0	1.5
October.....	54.1	40.4	13.7	50.2	37.9	12.3	3.9	2.5	1.4
November.....	54.1	40.3	13.8	50.2	37.7	12.5	3.9	2.6	1.3
December.....	54.0	40.2	13.8	50.2	37.6	12.6	3.8	2.6	1.2
<b>1942</b>									
January.....	53.2	40.0	13.2	48.9	37.0	11.9	4.3	3.0	1.3
February.....	53.4	40.0	13.4	49.4	37.2	12.2	4.0	2.8	1.2
March.....	54.5	40.0	14.5	50.9	37.6	13.3	3.6	2.4	1.2
April.....	53.7	39.8	13.9	50.7	37.8	12.9	3.0	2.0	1.0
May.....	54.2	40.0	14.2	51.6	38.4	13.2	2.6	1.6	1.0
June.....	56.1	41.1	15.0	53.3	39.4	13.9	2.8	1.7	1.1
July.....	56.8	41.6	15.2	54.0	39.9	14.1	2.8	1.7	1.1
August.....	56.2	41.1	15.1	54.0	39.7	14.3	2.2	1.4	.8

<sup>1</sup> Includes persons on public emergency projects.

For the most part, the reduction in the labor force from July to August took place among male workers (table 1) and among workers in the group 14–24 years of age (table 2). The decline in labor-market participation in the youngest age group reflected the withdrawal from the labor force of some of the students who were working or seeking work earlier in the summer.

Although the level of employment did not change from July to August, returns from the Monthly Report on the Labor Force indicate that extensive changes took place during the month in the composition of the employed group. Thus, a seasonal decline of 500,000 in agri-

<sup>1</sup> The Monthly Report on the Labor Force is the new designation for the Monthly Report of Employment and Unemployment which was transferred from the WPA to the Bureau of the Census, U. S. Department of Commerce, by Executive order No. 9232, August 25, 1942.

cultural employment was offset by an increase of 500,000 in the number of persons employed in nonagricultural industries. Similarly, a drop of 200,000 in the number of employed men was balanced by an increase of the same size in the number of employed women. In this connection, it is noteworthy that women accounted for 2,100,000 of the 3,000,000 increase in employment that took place during the year period from August 1941 to August 1942.

TABLE 2.—*Estimated Civilian Labor Force, Employment, and Unemployment, by Age Groups, July and August of 1940, 1941, and 1942*<sup>1</sup>

Labor-market status and age	1942		1941		1940	
	August	July	August	July	August	July
Estimated number (millions of persons)						
Labor force.....	56.2	56.8	56.4	56.6	56.6	56.9
14 to 24 years.....	14.4	14.9	14.6	14.9	14.8	15.1
25 to 54 years.....	33.3	33.3	33.5	33.5	34.0	34.0
55 years and over.....	8.5	8.6	8.3	8.2	7.8	7.8
Employed.....	54.0	54.0	51.0	50.9	47.7	47.6
14 to 24 years.....	13.5	13.6	12.3	12.5	10.9	10.9
25 to 54 years.....	32.3	32.3	31.3	31.0	30.1	29.9
55 years and over.....	8.2	8.1	7.4	7.4	6.7	6.8
Unemployed.....	2.2	2.8	5.4	5.7	8.9	9.3
14 to 24 years.....	.9	1.3	2.3	2.4	3.9	4.2
25 to 54 years.....	1.0	1.0	2.2	2.5	3.9	4.1
55 years and over.....	.3	.5	.9	.8	1.1	1.0
Unemployment rate <sup>2</sup> (percent)						
All age groups.....	4.0	4.9	9.5	10.0	15.7	16.4
14 to 24 years.....	6.3	8.7	15.5	15.9	25.9	27.6
25 to 54 years.....	3.0	3.0	6.8	7.3	11.5	12.1
55 years and over.....	3.5	5.8	10.2	10.5	14.4	14.1
Percentage distribution of unemployed						
All age groups.....	100.0	100.0	100.0	100.0	100.0	100.0
14 to 24 years.....	40.9	45.9	42.0	41.7	43.3	44.4
25 to 54 years.....	41.6	38.6	42.4	43.0	44.0	43.8
55 years and over.....	17.5	15.5	15.6	15.3	12.7	11.8

<sup>1</sup> All data exclude persons in institutions. Persons on public emergency work projects are included with the unemployed.

<sup>2</sup> Unemployed as a percent of labor force in each age group.

# Recent Publications of Labor Interest

OCTOBER 1942

## Agriculture and Agricultural Labor

*Land and labor: A social survey of agriculture and the farm labor market in central Canada.* By George V. Haythorne and Leonard C. Marsh. Toronto, Oxford University Press (for McGill University), 1941. 568 pp., maps, charts. (McGill social research series, No. 11.) \$4.

*Rural relief and rehabilitation under Farm Security Administration.* Washington, Chamber of Commerce of the United States, Agricultural Department Committee, 1942. 40 pp.

A critical analysis of the Farm Security Administration's program for small and tenant farmers.

*Toward farm security.* By Joseph Gaer. Washington, U. S. Farm Security Administration, 1941. 246 pp., bibliography, map, charts, illus.

Deals with the problem of rural poverty and the work of the Farm Security Administration in rehabilitating and training poor farm families. Written primarily for new employees (especially supervisors) of the Farm Security Administration.

## Cooperative Movement

*Consumer cooperative leadership: Organizing and running consumer cooperatives.* Boston, Edward A. Filene Good Will Fund, Inc., 1942. 173 pp., illus. \$1.25.

Intended for groups wishing to start consumers' cooperatives. Divided into two parts—Organization and Administration. The second includes chapters on the function of the board of directors, relationship between the board and the manager, procedure for successful committee work, functions of the major committees, and how to conduct meetings. Illustrations are given of a recommended floor plan and of a store interior. Appendixes include a bibliography and a list of "organizations of service to cooperatives."

*Maynard weavers—the story of the United Cooperative Society of Maynard [Mass.].* By F. Aaltonen. Maynard, United Cooperative Society, 1941. 75 pp., charts, illus. 30 cents.

A history of one of the old, well-established cooperative associations. Started (like the well-known society of Rochdale, England) by weavers, it was in the beginning almost entirely of Finnish membership and although its present membership includes many persons of other nationalities, it is still largely controlled by Finns.

*The morale of democracy.* By Jerry Voorhis, U. S. House of Representatives. New York, Greystone Press, 1941. 93 pp. \$1.

The thesis of the three addresses reproduced in this volume is that "The future of America depends upon the capacity of our people to develop understanding of this cooperative culture." The addresses are illustrated by data on the operation of consumers' cooperatives in the United States and other countries.

EDITOR'S NOTE.—Correspondence regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices are readily available, they are shown with the title entries.



*Credit committee handbook.* Washington, U. S. Farm Credit Administration, 1941. 40 pp. (Circular No. 27.) 10 cents, Superintendent of Documents, Washington.

Prepared for the guidance and use of credit committees of credit unions. Subjects covered include the social significance of credit, the loan application, purpose of loan, the applicant, amount of loan and terms of repayment, comakers, and organization and procedure of committees. The Credit Union Section of the Farm Credit Administration, which prepared this report, was recently transferred to the Federal Deposit Insurance Corporation.

*Ninth annual report of the Farm Credit Administration, 1941.* Washington, 1942. 273 pp., charts. 30 cents, Superintendent of Documents, Washington.

Contains data on the banks for cooperatives, the work of the Cooperative Research and Service Division, and Federal credit unions.

*Annual report of Tennessee Valley Authority, for fiscal year ended June 30, 1941.* Washington, 1942. 289 pp., maps, charts, illus. 45 cents, Superintendent of Documents, Washington.

Most of this report naturally deals with the power and conservation activities of the Authority. However, there are also certain data showing the distribution of electricity to electricity cooperatives, by States, and wages paid to employees of the Authority receiving over \$1,500 per year, by occupation, as of June 30, 1941.

### Cost and Standards of Living

*Clothing and house furnishings allowances (prices for San Francisco, March 1942).* Berkeley, University of California, Heller Committee for Research in Social Economics, 1942. 49 pp.; mimeographed. 50 cents.

Supplement to the Heller Committee quantity and cost budgets for three income levels, for dependent families or children, and for a single working woman, containing detailed clothing and housefurnishings budgets.

*Quantity and cost budget for a single working woman (prices for San Francisco, March 1942).* Berkeley, University of California, Heller Committee for Research in Social Economics, 1942. 14 pp.; mimeographed. 15 cents.

This budget is for a single working woman living in a boarding house and with no dependents. It provides a standard of health and decency but not a "saving wage." The annual cost of the budget—\$1,268.27—was examined for possible reductions in consumption to provide for current taxes and war savings, but the amount found possible was less than one-third of the sum necessary and any economies demanded beyond that would have to be in items absolutely essential to health and welfare.

*Low-priced milk and the consumption of dairy products among low-income families, Washington, D. C., 1940.* By Hazel K. Stiebeling, Sadye F. Adelson, Ennis Blake. Washington, U. S. Department of Agriculture, 1942. 28 pp., map. (Circular No. 645.) 10 cents, Superintendent of Documents, Washington.

*El standard de vida de las poblaciones de América (nivel de vida).* By Moisés Poblete Troncoso. [Santiago de Chile], Universidad de Chile, 1942. 295 pp., bibliography.

Collection of legislative enactments and studies pertaining to the standard of living in Latin American Republics, with some statistics over various years down to and including 1940, and some international comparisons. Topics covered include wage protection in constitutions and through legislation, and wage statistics; occupational distribution of population; cost of living; social-security legislation and its operation; vocational education; and cooperatives.

### Employment and Unemployment

*Changes in distribution of manufacturing wage earners, 1899-1939.* Washington, U. S. Bureau of the Census and U. S. Bureau of Agricultural Economics, 1942. 268 pp., maps, charts. 30 cents, Superintendent of Documents, Washington.

A study which grew out of problems of the declining opportunity for employment in manufacturing industries in some areas and communities. The need for regional and local information for the expansion of war industries led to an expansion of the study. Figures on wage earners in all manufacturing, by geo-

graphic division, are given for selected years from 1899 to 1939, with comparative figures of population and the labor force. Figures on manufacturing wage earners and total population by industrial area and by city groups on the basis of size are also given for various years. Details relating to distribution of wage earners between 1929 and 1939, by counties and other areas, are given for 24 industries particularly important in war production. The final section gives tabulations of the source materials used.

*The significance of employment patterns in households for labor market analysis.* By Gladys L. Palmer. Philadelphia, University of Pennsylvania, Wharton School of Finance and Commerce, 1942. 21 pp.; mimeographed. (Industrial research department special report No. 8.)

*Teacher tenure: Its status critically appraised.* Washington, National Education Association of the United States, Committee on Tenure, 1942. 39 pp., charts. 25 cents.

State laws controlling duration of teachers' contracts are summarized and some information is given on local regulation of their employment.

### Factory and Mine Inspection

*Factory inspection—a thirty-five years retrospect.* By Sir Duncan Wilson. (In Journal of Royal Statistical Society, London, Vol. 104, Part 3, 1941, pp. 209-224; charts.)

*Tentative coal-mine inspection standards.* Washington, U. S. Bureau of Mines, 1942. 48 pp.; mimeographed. (Information circular 7204.)

### Health and Industrial Hygiene

*Hours, holidays, health and the war effort.* By Lloyd Ross. Redfern, Australia, Australian Railways Union, [1942?]. 44 pp.

Summary of English research studies dealing with the effects of industrial fatigue on output and health, and selected statements bearing on the subject by individuals in Great Britain and Australia.

*Industrial health and the war.* By Daniel L. Lynch, M. D. (In New England Journal of Medicine, Boston, August 6, 1942, pp. 209-216, charts; 25 cents.)

Major features of a well-managed industrial-health program are enumerated, and there is a series of charts showing for 4,334 cases of illness among men and 11,615 among women, during the period 1936 to 1940, the distribution of illness per 1,000 workers, and the percentage of total calendar days lost through illness, by age and sex; and the days of the week on which sickness absences began, and the days on which the worker returned to the job, by sex.

*Mobilization of State forces for prevention of blindness.* New York, National Society for the Prevention of Blindness, 1942. 59 pp. (Publication 378; supplement to Sight-Saving Review, March 1942.) 35 cents.

Contains a list of the States having specified legislation relating to the prevention of blindness and the conservation of vision and describes the legislative provisions now in force.

*Report of study of granite, mica, feldspar and foundry industries in New Hampshire.*

By Frederick J. Vintinner, Elmer P. Wheeler, Forest H. Bumford. Concord, New Hampshire State Board of Health, 1941. 72 pp., diagrams, illus. The survey was confined to an engineering study of the dust hazards in these industries and did not include physical examinations of the workers.

*Industrial health and safety in the Argentine meat industry.* By Ismael Urbandt, National Hygiene Department, Buenos Aires. (In Industrial Safety Survey, International Labor Office, Montreal, April-June 1942, pp. 41-50, illus; 50 cents.)

### Income

*Limiting wartime incomes.* Round-table radio discussion by Neil Jacoby, Maynard Kreuger, Arthur Marget, May 31, 1942. Chicago, University of Chicago, 1942. 26 pp. 10 cents.

*State distribution of income payments, 1929-41.* By Daniel Creamer and Charles Merwin. (In *Survey of Current Business*, U. S. Bureau of Foreign and Domestic Commerce, Washington, July 1942, pp. 18-26; 15 cents.)

Includes statistics of distribution of labor income and of entrepreneurial income by industry, by State, and by year from 1929 to 1941.

### *Industrial Accidents and Accident Prevention*

*Coal-mine accidents in the United States, 1940.* By W. W. Adams, L. E. Geyer, M. G. Parry. Washington, U. S. Bureau of Mines, 1942. 134 pp. (Bull. No. 448.) 20 cents, Superintendent of Documents, Washington.

*Annual summary of injuries in petroleum industry for 1941.* New York, American Petroleum Institute, Department of Accident Prevention, 1942. 18 pp., chart.

*Quarry accidents in the United States during calendar year 1940.* By William W. Adams and Virginia E. Wrenn. Washington, U. S. Bureau of Mines, 1942. 87 pp., chart. (Bull. No. 447.) 15 cents, Superintendent of Documents, Washington.

*Basic safety and health requirements for establishments subject to Walsh-Healey Public Contracts Act.* Washington, U. S. Department of Labor, Division of Public Contracts, 1942. 12 pp.

The requirements outlined in the pamphlet set a minimum of safe and healthful working conditions that industry shall provide for workers covered by the Public-Contracts Act.

*Handbook of industrial safety standards, including supplement on wartime protection.* New York, Association of Casualty and Surety Executives, National Conservation Bureau, 1942. 190, xxxii pp., diagrams, illus. Rev. ed. 55 cents.

### *Industrial Relations*

*How collective bargaining works: A survey of experience in leading American industries.* New York, Twentieth Century Fund, 1942. 986 pp. \$4.

The volume contains detailed descriptions by authorities in the fields covered of the actual workings of collective bargaining in 16 industries and trades. Less detailed accounts are given for various other industries. The industries treated in detail are: Daily newspapers; book and job printing; building construction; bituminous coal; anthracite; railroads; men's clothing; hosiery; steel; automobiles; rubber products; glass; electrical products; Chicago service trades. Historical data on the growth of unionism and the development of collective bargaining are included. The 1941 membership of individual national and international unions is shown in an appendix.

*The closed shop.* By Jerome L. Toner. Washington, American Council on Public Affairs, 1942. 205 pp., bibliography. \$3.25 (paper, \$2.75).

A study of the history of the closed shop; employer and union practices; and attitudes and pronouncements of the Protestant, Jewish, and Catholic churches on the closed shop.

*Federal labor relations in time of war.* By Malcolm Ross. (In *American Labor Legislation Review*, New York, June 1942, pp. 85-96; \$1.)

Discussion of Federal agencies dealing with labor relations during World War I and the present war.

*Public control of labor relations: A study of the National Labor Relations Board.* By D. O. Bowman. New York, Macmillan Co., 1942. 504 pp. \$5.

The book is divided into 6 parts: Part I describes the legislative background of the National Labor Relations Act; Part II deals with unfair labor practices; Part III analyzes the problems confronting the Board in the certification of collective-bargaining representatives; Part IV considers in detail the procedures of the Board; Part V is concerned with organization and personnel; Part VI portrays the Board's record, considers public policy, and appraises the Board and the administrative process.

*Strikes in the Pacific Northwest, 1927-1940—a statistical analysis.* By John Blanchard and Dorothy Terrill. Portland, Oreg., Northwest Regional Council, 1942. 30 pp., charts.



*The great Southwest strike [of 1886].* By Ruth A. Allen. Austin, Tex., University of Texas, 1942. 174 pp., bibliography, illus. (Publication No. 4214.) Gratis.

### International Economic and Labor Conditions

*The I. L. O. and plans for a "people's peace": The London meeting of the Emergency Committee [of the Governing Body, International Labor Office], April 1942.* (In *International Labor Review*, Montreal, July 1942, pp. 1-43; also reprinted—10 cents.)

The London meeting was called to outline a program of practical preparation to meet post-war conditions, in accordance with the resolutions adopted by the International Labor Conference in New York in 1941.

*The international seamen's code: Conventions and recommendations affecting maritime employment adopted by International Labor Conference, 1920-1936.* Montreal, International Labor Office, 1942. 55 pp. 25 cents.

*Labor conditions in war contracts, with special reference to Canada, Great Britain, and the United States.* Montreal, International Labor Office, 1942. 59 pp. (Studies and Reports, series D, No. 23.) 25 cents.

*World organization—a balance sheet of the first great experiment.* Washington, American Council on Public Affairs, 1942. 426 pp. \$3.75.

Collection of papers presented at sessions of Institute on World Organization held at American University, Washington, D. C., in September 1941, covering the activities and accomplishments of the League of Nations and discussing causes which contributed to its collapse.

### Labor Organization and Labor Activities

*The Tobacco Workers International Union.* By Herbert R. Northrup. (In *Quarterly Journal of Economics*, Cambridge, Mass., August 1942, pp. 606-626; \$1.25.)

A relatively brief but informative history of the recently rejuvenated Tobacco Workers International Union.

*Union labor in California, 1941.* San Francisco, Department of Industrial Relations, Division of Labor Statistics and Law Enforcement, 1942. 37 pp.

The pamphlet gives the number of unions and their membership in different industries in California, and summary information on provisions of collective-bargaining agreements. Union-membership stipulations, military-service reemployment provisions, and vacation provisions of agreements are shown by industry group.

*War production.* Washington, Congress of Industrial Organizations, Department of Industrial Union Councils, 1942. 56 pp. (Publication No. 67.) 15 cents.

Handbook for the guidance of union officials in participating in solving production planning problems.

*Development of the labor movement in Great Britain, France, and Germany.* By W. A. McConagha. Chapel Hill, N. C., University of North Carolina Press, 1942. 199 pp. \$2.50.

The volume gives a short historico-analytical review of labor movements in Great Britain, France, and Germany, concentrating chiefly on labor unions. In regard to the Nazi "Strength through Joy" movement and activities in providing certain amenities to workers, the author states that "what is now being done ostentatiously by the State in a large measure was already being done quietly but effectively by the workers' own organizations before they were destroyed. This subjugation of German labor to the whim of a totalitarian political program calls attention again to the drabness of the history of the German working class."

*Labor looks ahead.* London, Labor Party, 1942. 11 pp.

A statement of the Labor Party's war and peace aims.

*Twenty-first annual report of Amalgamated Union of Building Trade Workers of Great Britain and Ireland for year ended December 31, 1941.* London, 1942. 104 pp.

Includes financial reports on social-insurance participation of members.

## Occupations

*A bibliography of occupational information and guidance.* Compiled by Frederick C. Seamster. Jefferson City, Missouri Department of Public Schools, 1942. 85 pp.

*Job and occupational analyses, their methods and end products.* By Edward E. Knott, Jr. Jefferson City, Missouri State Employment Service, 1941. 47 pp., bibliography; mimeographed.

*Jobs for today's youth.* By T. Otto Nall and Bert H. Davis. New York, [Young Men's Christian] Association Press, 1941. 168 pp., bibliography. \$1.75.

The book shows opportunities for employment in nine different fields, largely through descriptions of actual experiences of young workers in different occupations in these fields.

*Your career in engineering.* By Norman V. Carlisle. New York, E. P. Dutton & Co., Inc., 1942. 253 pp., illus. \$2.50.

## Old-Age Pensions

*Annual report of U. S. Railroad Retirement Board for fiscal year ended June 30, 1941.* Washington, 1942. 261 pp., charts. 25 cents, Superintendent of Documents, Washington.

The report covers the operations of the railroad retirement and unemployment-insurance systems for the fiscal year 1941. The retirement system had higher income, smaller obligations, and a larger increase in the retirement reserves during the year than had been actuarially forecast. Data on operations of the retirement system in the year ending June 30, 1942, are given on page 743 of this issue of the Monthly Labor Review.

*Consolidated annual report of Comptroller of City of New York, for fiscal year 1940-41.* New York, 1942. 444 pp.

Contains statements of receipts and disbursements of all the retirement systems of the city for which the comptroller is custodian. These systems include the teachers' retirement system, the Board of Education retirement system, and the Police Department and the Fire Department pension funds.

*Retirement plans for public employees.* Chicago, Municipal Finance Officers' Association of the United States and Canada, Committee on Public Employee Retirement Administration, 1942. 12 pp. 25 cents.

Discusses principles of a financially sound retirement system for public employees.

*Old age pensions—an historical and critical study.* By Sir Arnold Wilson and G. S. Mackay. London, Oxford University Press, 1941. 238 pp. \$4.50 in United States.

Factual account of the way in which the present British systems of noncontributory and contributory old-age pensions have developed and of the finances of the systems.

## Post-War Reconstruction

*Post-war planning in the United States.* By George B. Galloway. New York, Twentieth Century Fund, 1942. 158 pp., bibliography. 60 cents.

Report on a survey of the work of more than 100 agencies, public and private, engaged in post-war-planning research. The report lists the leading agencies and the projects each has under way. It is expected that the progress of the programs will be described in later editions of this volume.

*Select bibliography on post-war problems, especially on means of maintaining employment in the post-war period.* Washington, U. S. Bureau of Labor Statistics, June 10, 1942. 5 pp.; mimeographed.

*Some important issues of reconstruction intended as an aid to the study of post-war problems and specially designed to provoke discussion.* By The Workers' Educational Association, Yorkshire District (North). Leeds, England, Blenheim Institute, [1941]. 75 pp.

*Minutes of proceedings and evidence of Special Committee on Reconstruction and Reestablishment [of Canada], March 26 to July 2, 1942.* Ottawa, Parliament, House of Commons, 1942. 181 pp.

*These things shall be!* Notes on the restoration of Britain after the war. London, Labor Party, 1941. 12 pp.

*The war and the planning outlook.* By William A. Robson. London, Faber & Faber, Ltd., 1941. 28 pp. (Rebuilding Britain series, No. 4.) 1 shilling.

Confronted with an enemy relying on organization and planning, Great Britain is being forced to abandon improvisation, which has been so successfully used in the past. Therefore, planning must be made a popular movement to be effective in post-war rehabilitation, the author holds.

### Price Control and Rationing

*Price control and the profit system.* By Clifford J. Hynning. (In University of Chicago Law Review, Chicago, June 1942, pp. 561-583; 75 cents.)

Discussion of the relations between price control and profits, particularly from a legal point of view. The author concludes that wartime price control, "whether selective or by the general freeze," can reasonably be expected only to permit an industry subject to price control "the opportunity to earn reasonable profits under the circumstances." Any requirement that each producer be guaranteed a profit or that each price regulation shall assure profits even to each of the reasonably efficient producers "would be tantamount to denying the possibility of controlling inflation."

*Wartime price control.* By George P. Adams, Jr. Washington, American Council on Public Affairs, 1942. 153 pp. \$3 (paper, \$2.50).

Analysis of the work of the agencies most concerned with price control in the United States during the first World War, and a review of their procedures, techniques, and problems.

*Rationing—a selected list of references.* Compiled by Annie M. Hannay. Washington, U. S. Department of Agriculture, Library, July 1942. 60 pp.; mimeographed. (Library list No. 3.)

References on rationing during the present war, and in some cases during World War I. Material for 35 countries is included.

*Canned foods—withdrawal of the Government from the market, 1918-20.* By Stella Stewart and J. Donald Edwards. Washington, U. S. Bureau of Labor Statistics, 1942. 39 pp.; mimeographed. (Historical study No. 51.)

*Government controls of canned fish during World War I.* By Edmund Nash. Washington, U. S. Bureau of Labor Statistics, 1942. 40 pp.; mimeographed. (Historical study No. 36.)

*Annotated digest of statutory devices for rent and eviction control previous to Emergency Price Control Act of 1942.* Washington, U. S. Office of Price Administration, Rent Branch, [1942?]. 95 pp.; mimeographed.

Appendixes give the terms of rent-control laws of Canada, Great Britain, and several States of the United States.

### Production and Technological Changes

*Give us the tools: A study of the hindrances to full war production and how to end them.* By Argonaut, pseud. London, Secker & Warburg, 1942. 191 pp. 6 shillings.

*Management, labor and technological change.* By John W. Riegel. Ann Arbor, Mich., University of Michigan, Bureau of Industrial Relations, 1942. 187 pp. (Report No. 3.)

The Bureau of Industrial Relations of the University of Michigan undertook this study to obtain information on friction between employers and employees regarding technological innovation. First-hand information was obtained regarding the attitudes of about 100 employees; collective agreements with clauses relating to introduction of new methods were reviewed; and the policies of a number of "progressively managed companies" were studied. The views of the employees interviewed indicated that "workers normally fear and dislike technological change." The study of collective agreements indicated that union attempts to prevent technological changes are rare, and that the usual policy of unions is aimed at participation in control over introduction of technological changes and the imposing of obligations on those employers who retain the initiative in the introduction of technological changes.



*Producing for victory: A labor manual for increasing war production.* By International Federation of Architects, Engineers, Chemists, and Technicians. Washington, Congress of Industrial Organizations, 1942. 62 pp., charts, illus. (Publication No. 70.) 15 cents.

Deals with increasing the productivity of men and equipment and the effective use of materials.

*The war production program: Selected documentation on the economics of war.* Prepared by Legislative Reference Service, Library of Congress. Washington, U. S. War Production Board, Division of Information, July 1942. 31 pp.; mimeographed.

*An enquiry into British war production: Part 1, People in production.* A report prepared by Mass-Observation for the Advertising Service Guild. London, Advertising Service Guild, 1942. 410 pp. (Change, Bulletin of Advertising Service Guild, No. 3.) 10 shillings.

A survey made by 20 investigators between October 1941 and March 1942 to obtain the points of view of the various elements in industry, including employers and workers, on the efficiency of production. Among the factors affecting production which are discussed in the volume are the labor supply, woman workers, earnings, working hours, days off and rest periods, absenteeism, and industrial relations.

*Final report and statistical findings of production committee inquiry of Amalgamated Engineering Union, incorporating findings of regional board inquiry.* London, Amalgamated Engineering Union, 1942. Various paging; mimeographed.

Results of an investigation of factors tending to improve production and increase output in Great Britain, with special reference to the part played by production committees. The report is based on information covering 740 establishments with about 900,000 workers.

## Recreation

*Planning industrial recreation.* By G. Herbert Duggins and Floyd R. Eastwood. Lafayette, Ind., Purdue University, 1941. 82 pp., illus. \$1.

Subjects covered in the report are the implications of recreation in industrial relations, principles and policies of organization and administration, planning and initiating the program, and program administration.

*Proceedings of 26th National Recreation Congress and the Defense Recreation Conference, Baltimore, Md., September 29 to October 3, 1941.* New York, National Recreation Association, 1941. 240 pp. \$1.

*Training volunteers for recreation service.* By George D. Butler. New York, National Recreation Association, 1942. 58 pp.

A manual designed to provide assistance in planning and conducting training courses for volunteer recreation leaders.

## Vacations

*Dignificando en vacaciones: Obra que deba imitarse* [Buenos Aires, Argentina]. Buenos Aires, Unión Obreros Municipales, 1940. 122 pp., illus.

Account of the vacation home established in 1935 by the Municipal Workers' Union of Buenos Aires about 500 miles from that city. The report includes information on method of financing, low-cost transportation to and from the home, services and charges to guests, and medical care; a list of other organizations that have begun movements to establish similar homes near Buenos Aires; and newspaper and other articles regarding the home.

*Naturaleza jurídica de las vacaciones anuales remuneradas.* By [Antonio Ferrera] Cesarino, Junior. (In *Derecho del Trabajo*, Buenos Aires, August 1941, pp. 199-205.)

Documented discussion of the bases for granting annual paid vacations, and references to legal provisions regulating such vacations, especially in Brazil.

*Wartime Conditions and Policies*

*The extent of Canada's war effort.* By J. L. Ralston. Ottawa, Office of Director of Public Information, 1942. 28 pp.

Address delivered in the Canadian House of Commons by the Minister of National Defense on February 10, 1942.

*The British defense program and local government.* Compiled from British documents and periodicals by Don K. Price and James L. Sundquist for the American Municipal Association. Chicago, Public Administration Service, 1941. 55 pp. (Public Administration Service publication No. 69.) 75 cents.

Deals with the increased functions of local government, organization and powers, personnel, and special fields of operation.

*The job to be done.* By Ernest Bevin. London and Toronto, William Heinemann, Ltd., 1942. 204 pp. 8s. 6d.

Collection of speeches made by the British Minister of Labor and National Service reflecting his views as a trade-union leader and as a government official mobilizing labor for the war effort.

*Effects of the war on British marketing—a guide for American business.* By E. R. Hawkins. Washington, U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, 1942. 74 pp., charts. (Economic series, No. 18.) 15 cents, Superintendent of Documents, Washington.

Covers price control, control of supply, concentration, and merchandising operations.

*Canteens at work.* By C. G. Gardiner. London, Oxford University Press, 1941. 104 pp., charts, illus. 4s. 6d.; \$1.50, Toronto.

A description of the canteen organization developed in Great Britain as a result of the war. Details are given for planning lunchrooms, kitchens, etc., and of the equipment required.

*Foreign war workers in German war effort.* By Peter A. Speck. Washington, U. S. Bureau of Labor Statistics, 1942. 10 pp. (Serial No. R. 1465, reprint from June 1942 Monthly Labor Review.)

*Women in Industry*

*Labor-force reserves.* By Barkev S. Sanders. (In Social Security Bulletin, U. S. Social Security Board, Washington, July 1942, pp. 16-27; 20 cents.)

The writer examines the potentialities for further expansion of the labor force, especially through employment of women. As indications of the availability of women to augment the labor force, estimates are given of the number of women in the labor force on April 1, 1942, and of woman homemakers, by age group, marital status, and number and age distribution of their children; and estimates of number of single women working in the labor force and as homemakers, by age group.

*Women in war industries.* By Helen Baker. Princeton, N. J., Princeton University, Industrial Relations Section, 1942. 82 pp., bibliography. (Research report series, No. 66.) \$1.50.

Summarizes the principal personnel problems confronting industry in the greater employment of women, and shows methods which have been used in meeting such problems both in this country and in Great Britain.

*Women's part in World War II—a list of references.* Compiled by Florence S. Hellman. Washington, Library of Congress, Division of Bibliography, May 19, 1942. 84 pp.; mimeographed.

*Women's effective war work requires time for meals and rest.* Washington, U. S. Women's Bureau, 1942. 4 pp. (Special bull. No. 5.) 5 cents, Superintendent of Documents, Washington.

*Night work for women and shift rotation in war plants.* Washington, U. S. Women's Bureau, 1942. 8 pp. (Special bull. No. 6.) 5 cents, Superintendent of Documents, Washington.

*Washing and toilet facilities for women in industry—recommendations for installation and maintenance.* Washington, U. S. Women's Bureau, 1942. 11 pp. (Special bull. No. 4.) 10 cents, Superintendent of Documents, Washington.

## General Reports

*El libro del huaso Chileno—tercer libro.* By Juan Lucero. Santiago de Chile, Instituto de Información Campesina, [1940]. 96 pp., illus.

Reader prepared by the Government of Chile for adults, especially agricultural laborers and their families. It presents interesting material on compulsory social insurance, advance notice of termination of employment of agricultural laborers, agricultural cooperatives, and agricultural colonization.

*Anuario estadístico de la República Dominicana, 1940.* Ciudad Trujillo, Dominican Republic, Dirección General de Estadística, [1941?]. 2 vols.

Statistics of agricultural employment, wages, and public assistance in the Dominican Republic for 1940 are presented in volume I, and of industrial employment and wages for 1939 in volume II.

*Bibliografía Mexicana de estadística.* México, D. F., Secretaría de la Economía Nacional, Dirección General de Estadística, [1941?]. 696 pp. (Tomo I.)

Bibliography of material, principally statistical, concerning Mexico. The references include works dealing with labor questions, prices and cost of living, and other topics of labor interest.

*The economic history of Liberia.* By George W. Brown. Washington, Associated Publishers, Inc., 1941. 366 pp. \$3.

A thesis covering the origin and economic development of Liberia.

*Behind the Urals: An American worker in Russia's city of steel.* By John Scott. Cambridge, Mass., Houghton Mifflin Co., 1942. 279 pp. \$2.75.

The writer, an American, describes economic, industrial, political, and working and living conditions in the new industrial city of Magnitogorsk, where he worked for 5 years as, in turn, an electric welder, a foreman, and a chemist in a coke and chemical byproducts plant.

*Industry in Southeast Asia.* By Jack Shepherd. New York, Institute of Pacific Relations, International Secretariat, 1941. 133 pp. 75 cents.

Indicates certain broad general trends in industrial development in Southeast Asia and compares the various types of industrial development which have occurred in different countries in the region.

*Labor report [Australia], 1940.* Canberra, Commonwealth Bureau of Census and Statistics, 1942. 171 pp.

A detailed statement on the method of compiling indexes of retail prices and rents is included, as well as statistical summaries of price, wage, employment, and unemployment data.

*Modern Burma.* By John Leroy Christian. Berkeley, Calif., University of California Press, 1942. 381 pp., bibliography, map. \$3.

Survey of political and economic development in Burma. The book, written for the Institute of Pacific Relations, had just been printed in Shanghai when Japan attacked the United States. For the reprint in this country, the author has added a section on events up to the end of January 1942.